THE STRATEGIC CORPORAL AND THE EMERGING BATTLEFIELD

THE NEXUS BETWEEN THE USMC'S THREE BLOCK WAR CONCEPT AND NETWORK CENTRIC WARFARE

Master of Arts in Law and Diplomacy Thesis

Submitted by James E. Szepesy

March 2005

http://fletcher.tufts.edu

THE FLETCHER SCHOOL

TUFTS UNIVERSITY

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
MAR 2005		**00-00-2005 to 00-00-2005**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
The Strategic Corporal and the Emerging Battlefield. The Nexus Between the USMC's Three Block War Concept and Network Centrix Warfare	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Tufts University,The Fletcher School,160 Packard Ave,Medford,MA,02155**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**Same as Report (SAR)**	**76**	

EXECUTIVE SUMMARY

The modern international security environment has undergone significant changes since the end of the Cold War. The nature of the battlefield has changed from rural to urban. New technology promises tremendous capabilities, and there are new actors on the scene. These changes have had an impact on the approaches used by U.S. security instruments to implement U.S. policy.

The U.S. Marine Corps identified the changing battlefield in the later half of the 1990s and articulated its vision of future warfare as the Three Block War. Concurrent to Marine Corps' development of the Three Block War was an explosive growth in information technology developments. The end of the Cold War, budgetary pressures, changing face of war, and technological advancements at the start of the 21st Century generated tremendous pressure upon the US military establishment to adapt. Emerging from these pressures was a desire to operationalize the information technology advancements realized at the end of the 20th Century in what is being called Network Centric Warfare. These two vectors, refining the Three Block War model and Network Centric Warfare, have come to be important elements to the strategies and tactics used to fight in Operation Enduring Freedom and Iraqi Freedom as well as components to the consequent debate about the appropriate structure and composition of the U.S. military for the 21st Century.

The convergence of the Three Block War and Network Centric Warfare has led to renewed importance and significance of individual actions on the battlefield, the rebirth of the Strategic Corporal for 21st Century warfare if you will. The nexus of the Three Block War, Network Centric Warfare, and the Strategic Corporal have been put to the test in Iraq. Recent events associated with the battle for Fallujah, Iraq, the strategies and tactics employed, and preparations for operations highlight the importance of the individual and provide an example of how to maximize the strengths of the Three Block War and Network Centric Warfare.

In the fight for Fallujah, the small unit leader emerged as a center of gravity. His ability to affect the tactical level had strategic implications. To maximize the positive effects of these small unit leaders, the Marines developed their strategy to integrate the Three Block War principles with Network Centric Warfare concepts. They used the training concepts developed for the Three Block War and augmented them with the equipment developed for Network Centric Warfare. The result was tantamount to a human network centered on the small unit leader, the Strategic Corporal.

Future applications of this model will have to be tailored to the specific situation. There are specific aspects associated with intelligence, command relationships, technology, preparation, media, and integration that will be unique to future conflicts. These aspects were addressed in the fight for Fallujah and resulted in success. Intelligence provided the Strategic Corporal in Fallujah with contextual knowledge, as well as time sensitive targeting information. The command relationship used sectors and focused on giving the small unit leader flexibility in his objective area while synchronizing his actions with strategic objectives. Technology was used effectively. It was responsive to the needs of the small unit leader and developed to enhance their mission accomplishment. Preparation for Fallujah was based on Three Block War concepts emphasizing the importance of scenario-based training, the ability to transition between high and low intensity operations, and presence of media. Initially, media and information employment during Fallujah favored the adversary. Eliminating unverifiable information sources and preparing in advance for potentially negative events eventually neutralized this. The role of agencies outside the military was also a factor. Identifying the special skills relevant to a situation is important. Integrating those special skills is also important and more difficult. When those skills are not available, adjustments to plans are required to compensate. These adjustments may prove to be sub optimal.

ACKNOWLEDGEMENTS

I would like to thank members of the Camp Pendleton based First Marine Expeditionary Force and First Marine Division for their contributions to this effort. Staff officers and non-commissioned officers, including some recently retired officers, took time out of their busy schedules to provide detailed information related to events in Iraq. Their first hand experience of events on the ground as well as what they did in preparation are invaluable to the study of this particular conflict. I would also like to thank representatives from the Marine Corps' Combat Development Command, System Command, and Warfighting Lab for their contributions. They provided unique insight into how the supporting establishment mobilized in support of Operation Iraqi Freedom and the subsequent fight for Fallujah.

CONTENTS

FIGURES

INTRODUCTION

The Cold War came to an end with the collapse of the Soviet Union in 1991. In its wake was a sea of uncertainty about the future shape of the international security environment. Francis Fukuyama's "The End of History,"[1] and Samuel Huntington's "The Clash of Civilizations"[2] typified attempts to describe the future security environment. Politically, the end of the Cold War signaled an opportunity to transfer money earmarked for the military and security institutions to other causes, the famed "Peace Dividend." The ensuing pressure of the "Peace Dividend" forced the military and security institutions to search for the most efficient and value oriented programs and policies. The 1990s attempted to understand the post-Cold War security environment and corresponding implications for military and security institutions.

The end of the 20th Century was marked with uncertainty. In contrast, change and transformation dominate military affairs so far in the 21st Century. There is greater confidence in the framework being developed to explain and understand the post-Cold War security environment. With this confidence comes action in the form of adapting strategy and policy. Doctrine and acquisitions are beginning to reflect the new security environment realities. Military and security institutions are undergoing changes aimed at adjusting to the modern battlefields, which have gone from sparsely populated countrysides to densely populated urban areas. The pressure to maximize efficiency and value continue, fueled in large part by the tremendous innovation in information technology over the past decade. These advancements have catalyzed a revolution in military affairs that is guiding the military and security institutions' transformation to capitalize on the capabilities offered by the technological

[1] *National Interest*, (Summer 1989).
[2] *Foreign Affairs*, (Summer 1993).

innovations. A transformation has begun while a deeper understanding of the modern security environment is coming into focus.

The modern security environment is not restricted to traditional sovereign actors. It is not even restricted to uniformed actors. The sources of instability and precipitants to war are increasingly found to be internal. Internal grievances coupled with the inability or unwillingness of governments to address them have sparked violent groups that seek to take matters into their own hands. These groups do not wear uniforms or recognize the traditional difference between combatants and non-combatants. Some of these groups receive support from sympathetic external supports, while others seek to take their ideas and apply them across a region. As a result, militaries are no longer limited to combating each other for they are also combating sub-state and trans-national armed groups.

The current conflict in Iraq exemplifies many of the changes to the security environment. It also serves as a test bed for many of the new assumptions about the modern security environment and the consequent policy, strategy, and acquisitions. While Iraq started as a traditional conflict between sovereigns, it has progressively changed into an internal conflict with many of the characteristics associated with the post-Cold War security environment. The fighting in Iraq moved quickly from the vast deserts and farmland in the west and south to the urban areas of the Sunni Triangle. Currently, the only significant military actions outside of urban areas in Iraq are the sabotage to the country's infrastructure. Many of the initiatives to reap the technological benefits initiated at the start of the 21st Century are being tested, challenged, refined, and adapted in Iraq. New ideas, communications equipment, command and control systems and major end items are being deployed to Iraq foregoing much of the traditional acquisition process. Concepts like the U.S. Army's Stryker Brigade and U.S. Marine Corps Special Operations Command

Detachment One are seeing their first operational tasks in Iraq. The current conflict is also illustrative of the non-traditional protagonists. The Iraqi army's limited resistance quickly gave way to insurgent warfare by Saddam Hussein loyalists, religious extremists, and international fighters with support and allegiance from elements within Iraq, Iran, Syria, and trans-national organizations like al Qaeda and Hezbollah as well as organized criminal activity.

The United States Marine Corps identified the changing nature of warfare in the latter half of the 1990s and articulated its vision of future warfare as the Three Block War. In the Three Block War, there can be a mixture of intense combat and peace keeping operations simultaneously taking place within the confines of three city blocks, escalating and de-escalating in a fluid and dynamic manner. This framework not only takes into account the increasing urban character of modern warfare, but also the rise of non-traditional protagonists. Central to the Three Block War is the role of the individual in modern warfare. The Three Block War is at the heart of the Marine Corps' training, preparation, and approach to operations in Iraq. This approach has most recently been tested in the battle for Fallujah, Operation Al Fajr (New Dawn).

Concurrent to Marine Corps' development of the Three Block War was the rise of the Network Centric Warfare concept. This concept looked to operationalize the explosive growth in information technology advancements realized at the end of the 20th Century. The budgetary pressures at the end of the Cold War combined with promising technology advancements provided an opportunity to transform the military and security institutions into a more cost effective and value oriented force with increased capabilities. The U.S. Department of Defense, along with its uniformed services, has taken positive steps to implement elements of Network Centric Warfare. The move to accelerate intelligence analysis and distribution to reduce the target identification to engagement timeline is one example. Many of the concepts associated

with Network Centric Warfare, and its emphasis on operationalizing technology, are also being put to the test in Iraq.

The convergence of the Three Block War and Network Centric Warfare and their applications to Afghanistan as well as Iraq has spotlighted an important role for individuals. The Three Block War's emphasis on small unit leaders and Network Centric Warfare's self-synchronizing and swarming concepts give new importance to the concept of the Strategic Corporal. U.S. Secretary of Defense, Donald Rumsfeld alluded to this when he commented about a battle in the Afghan war.

> What won the battle for Masar-i-Sharif – and set in motion the Talibans' fall from power – was a combination of the ingenuity of the U.S. special forces; the most advanced, precision-guided munitions in the U.S. arsenal, delivered by U.S. Navy, Air Force, and Marine Corps crews; and the courage of valiant, one-legged Afghan fighters on horseback.[3]

The important role of the Strategic Corporal in the modern security environment is further evident in the battle for Fallujah, Iraq. Individuals triggered the initial crisis and individuals were central to the success of the battle that ensued. Throughout their area of responsibility, the U.S. Marines are conducting operations that are based in part on the tenets of the Three Block War and Network Centric Warfare. A look at how the Three Block War and Network Centric Warfare influenced the U.S. Marine Corps operations in Fallujah along with a look at some of the lessons learned will provide insight into the skills, equipment, and training required of Strategic Corporals for 21st Century warfare.

THE THREE BLOCK WAR CONCEPT

Background

General Charles C. Krulak, 31st Commandant of the United States Marine Corps, described

[3] Donald H.Rumsfeld, "Transforming the Military," *Foreign Affairs*, 81, issue 3 (May-June 2002).

the Three Block War concept in a 1997 speech to the National Press Club.[4] He characterized future conflicts as asymmetrical battlefields where service members will likely experience and operate in a wide spectrum of military operations in a confined area over a short period of time. "In one moment in time, our service members will be feeding and clothing displaced refugees … the next moment, they will be holding two warring tribes apart … and, finally, they will be fighting a highly lethal mid-intensity battle – all on the same day … all within three city blocks."[5] The cities will increasingly be close to water; "by 2010, over 70 percent of the world's population will live in the urban areas and most of these, within 300 miles of a coastline – in the world's littorals."[6] In 2003, the United Nations confirmed the urbanization trend in its World Urbanization Prospects, figure 1.

[4] Gen. Charles C. Krulak, transcript of "The Three Block War: Fighting in Urban Areas," *Draft Remarks for The National Press Club 10 October 1997* [online], (accessed 16 October 2004); available from http://www.usmc.mil/cmcspeeches.nsf/0/6f38a0fe88a127fa85256530006f3951?

[5] Krulak, "The Three Block War: Fighting in Urban Areas."

[6] Ibid.

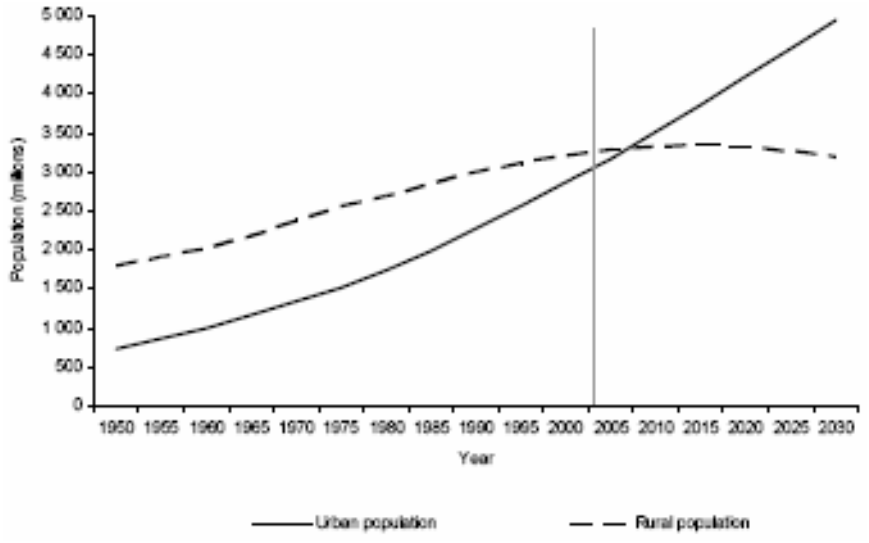

Figure 1. Urban and rural population 1950-2030.[7]

The concept of fighting in cities across a wide spectrum of conflict served as the backdrop for United States Marine Corps' doctrine, training, procurement, and transformation during the end of the 20th Century. The Marine Corps shifted its focus from the Cold War fight to the new security environment. The current Commandant of the United States Marine Corps, General Michael W. Hagee, echoed the relevance of the new battlefield in the emerging post-Cold War security environment when he published his Commandant's Guidance. In it, he says, "many of the Nation's most menacing security challenges lurk in the world's littorals and are characterized by multiple threats, growing instability, and an increased requirement for robust global power-projection capabilities."[8]

The Three Block War concept rose out of the lessons learned from international conflicts in Somalia, Liberia, Haiti, and Bosnia during the early 1990s.[9] In addition to taking place in littoral

[7] United Nations Department of Economic and Social Affairs, Population Division, *World Urbanization Prospects, The 2003 Revision: Data Tables and Highlights*, [online] (accessed 23 January 2005); available from http://www.un.org/esa/population/publications/wup2003/WUP2003Report.pdf, 9.

[8] Gen. Michael W. Hagee, *33rd Commandant of the Marine Corps' Guidance* [online], (Washington D.C.: Headquarters United States Marine Corps, 2002), (accessed 24 October 2004); available from http://www.usmc.mil/cmc/33cmc.nsf/attachments/$FILE/33cpg.pdf.

[9] Krulak, "The Three Block War: Fighting in Urban Areas."

urban areas, humanitarian relief in unstable environments with significant media coverage characterized these struggles. U.S. military forces, the crisis management tool selected in these situations, found themselves in complex situations, which had the capacity to escalate extremely quickly to intense fighting and potentially become negative international media events. The conflicts highlighted the effects of "rapid diffusion of technology, the growth of a multitude of transnational factors, and the consequences of increasing globalization and economic interdependence"[10] on the international security system. Additionally, when you combine these effects with the mass migration trend to overpopulated urban areas and the "long simmering ethnic, nationalist, and economic tensions"[11] they fuel, you create an environment ripe for complex and dynamic crises to emerge. As a result, these crises can escalate quickly, violently, and lethally in the urban environment where the U.S. military's traditional technological advantages are negated.[12]

The ability for tactical situations to become international crises in the Three Block War has shortened the distance between levels of command. Actions taken by small unit leaders can have serious repercussions at higher levels of command very quickly. The easy access to information and presence of the global media can transmit scenes from the front lines of the Three Block War across the world. It allows politicians, senior military officers, and ordinary citizens to simultaneously witness the conduct of a mission and critique it as it unfolds. The result is virtual presence of high levels of command in tactical situations. The distance and separation previously associated with military operations has been reduced. The tactical environment faced

[10] Gen Charles C. Krulak, "The Strategic Corporal: Leadership in the Three Block War," *Marines Magazine* 28, no. 1 (1999): 32.
[11] Krulak, "The Three Block War: Fighting in Urban Areas."
[12] Ibid.

by the small unit leader no longer has to work its way through layers to reach high levels of command. In the Three Block War, high levels of command have front seat tickets to conflicts.

Description

The Three Block War covers the spectrum of conflict from humanitarian assistance to intense combat operations short of all out war, figure 2. The military has labeled this broad spectrum of operations as Military Operations Other than War (MOOTW), which "[focuses] on deterring war, resolving conflict, promoting peace, and supporting civil authorities."[13] The underlying idea is early involvement will reduce the potential of international crises by addressing pre-crises sources and causes.

What is distinct about the Three Block War is it applies MOOTW to the urban environment. It combines the skills of Military Operations in Urban Terrain (MOUT) with MOOTW. The Three Block War places a heavy emphasis on MOUT skills in order to be prepared should deterrence, conflict resolution and peace promotion fail and crisis emerge. MOUT skills enable successful attaining of goals should the crisis lead to conflict.

The concepts associated with MOUT and MOOTW are not new. They have been part of military training for some time. The Marine Corps' adoption of the Three Block War, however, combines the two concepts and makes them the central focus of Marine Corps doctrine. Previously, MOUT and MOOTW were simply other missions the military prepared for and were considered secondary to the primary mission of preparing to fight large scale maneuver wars in open terrain.

[13] *Joint Doctrine Encyclopedia* [online], 16 July 1997, (accessed 16 October 2004); 513, available from http://www.dtic.mil/doctrine/jrm/encyclop.pdf.

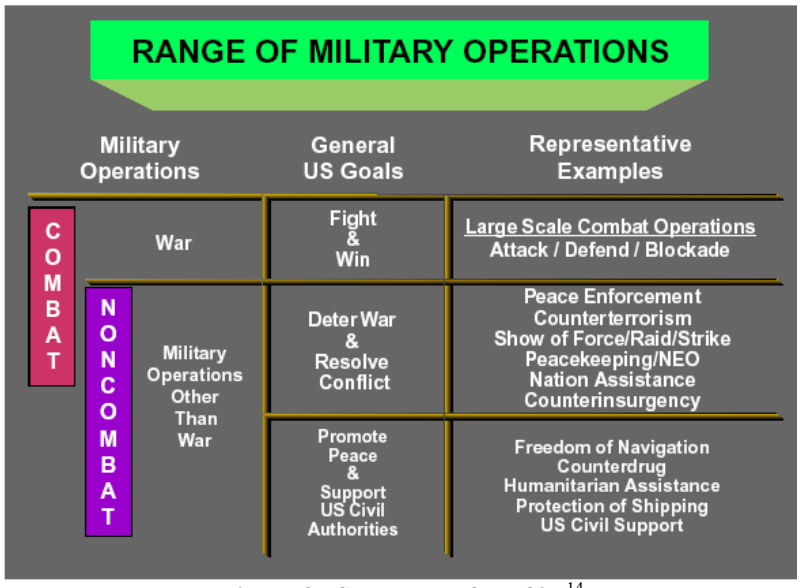

Figure 2. Spectrum of conflict[14]

In addition to integrating MOUT and MOOTW, the Three Block War acknowledges and takes into account the ubiquitous nature of global media in future conflicts. The Marine Corps uses cultural training as one of the ways to take into account the presence of global media and minimize the pressures it can generate. Many of the destabilizing, and often embarrassing, scenes captured by global media are the result of a misunderstanding or lack of understanding local culture. This was particularly the case with images broadcast from Abu Ghraib prison. Not only did it reveal a maltreatment of prisoners of war, but the way they were maltreated was particularly offensive to the Islamic world. The result was outrage and an erosion of support. Through cultural training, Marines are taught to recognize and respect culturally significant behavior. With that knowledge, they are better able to recognize and reduce situations that can be misunderstood and subsequently escalate into crisis. Minimizing the occurrence of these situations reduces the likelihood they will be caught on tape by the global media and used as a catalyst.

[14] Ibid.

To succeed in the Three Block War and reduce the potential for tactical actions to become international crises, emphasis is placed on the decisions and actions of small unit leaders. "Success or failure will rest, increasingly, with the rifleman and with his ability to make the *right* decision at the *right* time at the point of contact."[15] Marines fighting the Three Block War will be operating in small units, coordinated by the mission order received prior to commencing their specific tasks. Higher headquarters will only be able to supervise these small units through limited radio contact. Radio contact is limited by the line of sight disruptions posed by buildings in an urban environment. As a result, small unit leaders will be required "to confidently make well-reasoned and *independent* decisions under extreme stress."[16] These decisions will have to be made faster than the opponent makes decisions to dominate in the Three Block War. This is not a new concept and is often referred to as working inside the opponent's observe, orient, decide, and act (OODA) loop; a term coined by the late U.S. Air Force Colonel John Boyd.[17]

The Three Block War places an emphasis on small units largely because of the physical characteristics of the urban battlefield. The maze of streets, allies, and walkways along with the channeling effects of buildings and structures prevents large units from operating the way they would in the sparsely populated battlefields of before. Large units have to break down into their subunits to be able to maneuver in the constricting terrain of cities.

Subunit operations, however, are not enough to operate in this environment. If the subunits are not tied together in some fashion, their independent actions can be counter-productive. The same constraints to large unit operations limit a small unit's ability to see and know what is happening around the corner or on the next city block. A unit on one block of the city, for

[15] Krulak, "The Strategic Corporal: Leadership in the Three Block War," 33.
[16] Ibid.

instance, could encounter a situation where they have to deliver rifle fire. If that unit is not tied into its higher command, it may not know that another unit is operating within the kill zone of the rifle fire. This is one of numerous situations that illustrate the limitation and challenges of independent small unit operations in this environment.

Application

To balance the requirement for integration with the need to operate small forces, the Marines have placed significant emphasis on developing and issuing mission type orders that articulate not only the parent unit's intent, but the parent unit's higher headquarters' intent too. This provides the small units the information they need to exploit opportunities that arise in their small sector while generally knowing who is in the area and what they are attempting to accomplish. It provides for unity of effort and creates a synergistic effect.

The emphasis on small units and their ability to understand not only their assigned mission, but also how that mission fits into a larger context, places an enormous amount of responsibility on the small unit leader, the non-commissioned officer. This responsibility falls upon the shoulders of individuals with relatively little experience compared to that of the leaders of larger units. Marine Corporals, the non-commissioned officer rank typically leading these small units, have two an a half years military experience on average. In contrast, Lieutenant Colonels, the officers leading battalions, have an average of sixteen years military experience. This creates a situation where the "least experienced leaders – those with the least skill in decision-making – will face the most demanding decisions on the battlefield."[18] To compensate for the disparate experience, small unit leaders undergo very rigorous training to develop their warfighting,

[17] For a detailed description of the Observe, Orient, Decide, Act (OODA) loop, refer to the 16 July 1997 Joint Doctrine Encyclopedia, pp 221-222.

leadership, and decision-making abilities. The current Marine Corps Commandant emphasizes this, directing the Marine Corps to "continue to develop leaders who, given mission-type orders and commander's intent, can think on their feet, act independently, and succeed."

The urban battlefield has unique warfighting implications. The small unit leaders, along with their subordinates, are taught the specific principles of fighting in this new battlefield in MOUT training. Small units conduct live fire MOUT training on ranges designed to resemble city blocks. They also conduct non-live fire exercises in populated cities. The training exercises are part of large unit training, but focus on small unit actions. It is part of large unit training because the parent unit works on integrating the actions of the small units while the small units gain exposure and experience to the battlefield.

Another aspect of the Three Block War, which Marine Corps units prepare for and practice in exercises is the social, ethnic, and cultural flavor to the urban battlefield. The close proximity of people with different ethnicities, religious beliefs, or political affiliations combined with the lawless nature within the cities that Marines are called to intervene create potentially explosive situations. A cultural misunderstanding by Marines can easily turn a docile populace into a violent mob very quickly with lethal consequences. When the ubiquitous presence of global media is factored in, cultural misunderstandings by small units operating inside a single block of a conflict city instantly become international incidents televised to the world's living rooms.

To prepare for these eventualities, character development among Marines is important. It provides the foundation from which respect and understanding of other cultures, religions, and political affiliations can be built. This respect and understanding is further developed through

---

[18] Gen. Charles C. Krulak, "Cultivating Intuitive Decisionmaking," *Marine Corps Gazette* 83, no. 5 (May 1999), (accessed 15 October 2004); available from

context specific cultural training prior to deployment. Prior to deploying to Iraq in support of Operation Iraqi Freedom II, every Marine participated in focused cultural training to learn about cultural, ethnic, religious, and political peculiarities of Iraq. [19]

The Marine Corps' Three Block War concept is able to address the characteristics of the 21st Century's emerging primary battlefield. Focusing on small units to operate in the compartmentalizing and channeling terrain of urban areas, the Three Block War achieves synergistic affects by linking their efforts with mission-type orders and commander's intent. It prepares the small unit leaders and compensates for their inexperience through rigorous leadership, decision-making, and MOUT training. Cultural, ethnic, religious, and political tensions are accounted for through individual character development and context specific cultural training prior to deployment. All of this allows the Marines to observe, orient, decide, act, and adjust quickly in the urban fight, significantly increasing the potential for success.[20]

NETWORK CENTRIC WARFARE CONCEPT

Background

The Information Age provides the context within which Network Centric Warfare was developed. The end of the Cold War overlapped the dawn of the Information Age. It triggered a movement away from mass production of goods as the primary economic force to knowledge and information as the primary source of power. In what are sometimes referred to as Third

---

http://www.au.af.mil/au/awc/awcgate/usmc/cultivating_intuitive_d-m.htm.

[19] One of the cultural lessons learned and subsequently applied was that Iraqis believed that the sunglasses worn by service members had the ability to see through clothes. This offended many Iraqis who thought the service members intentionally used these sunglasses to look at the Iraqi women. As a result, Marines were not authorized sunglasses when operating around Iraqis and were told the reasons why.

[20] USAF Colonel John Boyd is credited with coining the term OODA, (Observer, Orient, Decide, Act), to describe the decision cycle. This concept has been adopted and expanded upon by U.S. Joint Chiefs of Staff in the *Joint Doctrine Encyclopedia*, page 221, available from http://www.dtic.mil/doctrine/jrm/encyd_h.pdf.

Wave civilizations, the Information Age established "knowledge – including science, technology, culture, religion, and values – [as] … the core resource."[21]

While knowledge has always been important, it was the dynamic advances in information technology towards the end of the Cold War that gave birth to the Information Age. This technology made it possible to provide decision-makers with high quality information in an increasingly timely fashion. As a result of these technological advances, both the quantity and accessibility of relevant information has increased. The availability of information in a timely manner creates information dominance, which enables quick decisions or a tight OODA loop.

Network Centric Warfare is an attempt to harness these advances in information technology and apply them to military and security institutions. It looks at how information technology transformed the economy and applies the same principles to warfighting. By 1996, the information technology sector of the US economy amounted only to three percent of the total economy. That three percent, however, was responsible for thirty-three percent of the increase in US gross domestic product that same year.[22] Companies are able to use the growth in information technology to develop networks, which allows them to harness the relationship with various elements within the economy to develop and produce products very quickly. The networks allow decision makers within firms to establish information dominance and "translate information superiority into significant competitive advantage."[23] Network Centric Warfare aims to do a similar thing for the military and security institutions.

[21] Alvin and Heidi Toffler, *War and Anti-War*, (New York: Warner Books, 1993) 17.

[22] VAdm. Arthur K. Cebrowski and John J. Garstka, "Network-Centric Warfare: Its Origin and Future," *Proceedings* 124/1/1, no. 139 (January 1998), (accessed 2 November 2004); available from http://www.usni.org/proceedings/Articles98/PROcebrowski.htm.

[23] Ibid.

The U.S. Department of Defense, eager to take advantage of promising technologies in the face of current budgetary pressures, is in the process of transforming to capitalize on Network Centric Warfare concepts. It seeks to reduce the size of a force required to accomplish a mission by arming that force with precise knowledge about adversaries and weapons that can take advantage of that precise knowledge to produce desired effects. In short, it is looking to restructure so it can establish information dominance to establish a competitive advantage over an adversary. Network Centric Warfare's application of technological advancements promises to create a smaller, less expensive force with greater capabilities than today's forces.

Description

The advancements in information technology enable decision makers to access information pertinent to a particular situation in unprecedented quantity and speed. "Across a broad range of activities and operations, the time required by individuals to access or collect the information relevant to a decision or action has been reduced by orders of magnitude, while the volume of information that can be accessed has increased exponentially."[24] Properly harnessed, the information will enable war fighters to translate the information to battlefield dominance. Information generates battlefield dominance when decision makers are able to develop and maintain an accurate perception of the battlefield and the forces influencing it, a term referred to as situational awareness. Sustained accurate situational awareness enables the decision makers to quickly observe, orient, decide, and act faster than an opponent. The developments in information technology provide the information required to sustain an accurate situational awareness.

[24] David S. Alberts, John J. Garstka, and Frederick P. Stein, "Network Centric Warfare: Developing and Leveraging Information Superiority, 2nd ed. (Washington D.C.: CCRP, 1999) 16.

Information, however, is only part of Network Centric Warfare. This concept addresses how to attain the information and use the information. In the battlespace there are numerous sensors that can be used to generate information. These sensors can provide information about an enemy's disposition as well as the friendly disposition. There are also numerous customers in the battlespace who can use the information generated by these sensors to make critical decisions. By establishing networks, you enable the customers to gain direct access to the information generated by the sensors. This information allows the customers to instantaneously observe and orient to a situation by depicting the opponents disposition as well as the disposition of friendly forces; immediate situational awareness. In turn, this information allows the customers to not only quickly decide on a course of action and act, but also instantaneously see the effect of the decided course of action. This allows the customer to quickly adjust as necessary to attain the desired result. "In essence, [Network Centric Warfare] translates information superiority into combat power by effectively linking knowledgeable entities in the battlespace."[25]

Application

To apply the concepts of Network Centric Warfare requires an operational architecture consisting of three grids, an information grid, a sensor grid, and an engagement grid.[26] The information grid provides the backbone and means for information to flow through the network. It consists of high power computers, routers, switches, communication satellites, and other data transmit, transfer, and storage equipment. The sensor grid provides input data to the network. It consists of traditional intelligence data collection systems like imagery satellites and signal interceptions as well as operational systems, which have historically limited the distribution of

[25] Ibid. 2.
[26] Cebrowski and Garstka.

the data they collected to individual operators. With a sensor grid, data collected by operational systems like fighter aircraft, attack helicopters, tank crews, surface combatants, and submarines are made available to the network. The engagement grid uses the information to produce effects. It includes operational systems typically associated with effects like fighter aircraft, attack helicopters, tank crews, surface combatants, and submarines. It also includes systems not normally thought of in this arena like intelligence and logistics systems. An imagery system, typically associated with data collection, can produce effects by distributing the information it sees, like the massing of people, to potential users, like a traffic signal along a re-supply convoy route. The network recognizes the massing of people as a potentially volatile situation and therefore changes the traffic signal. This creates the effect of having re-supply convoys avoid the unpredictable crowd and reach their intended destination unharmed. In a more traditional sense, a network can decrease the time from target identification to target engagement by not only distributing target data to a shooter, but also making the shooters aware of which shooter is in the best position to affect the target. Figure 3 graphically depicts how the three grids relate within the operational architecture for Network Centric Warfare.

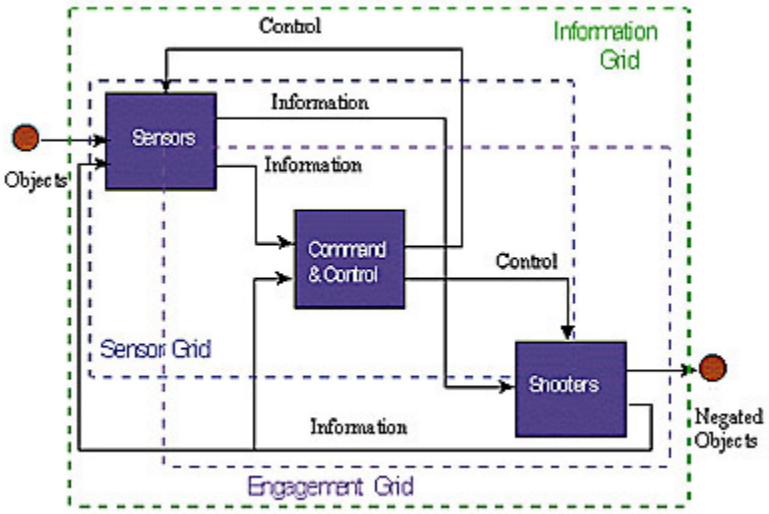

Figure 3. Net Centric Warfare Operational Architecture[27]

Many of the components for the sensor and engagement grids are already available. The limiting factor for Network Centric Warfare has been the information grid. This is quickly changing. The US Department of Defense is investing heavily to develop the information grid. It is also facilitating the networking of the components of the sensor and engagement grid by directing current system modernization and future system development be compliant with the Department of Defense Information Technology Standards Registry.[28] Every US military service has made significant steps towards exploiting current information technology. The Theater Battle Management Core System works to attain network advantages in developing and executing an air campaign. Similarly, the Future Combat System seeks to harness the capabilities of networks for land warfare.

There has been measured progress in developing systems and tactics for Network Centric Warfare as well as preliminary evaluations of them. The various branches of the U.S. military have developed and conducted numerous war games and exercises centered on Network Centric Warfare concepts. More recently, the conduct of ground operations in Afghanistan during Operation Enduring Freedom resembled Network Centric Warfare. During Operation Iraqi Freedom, the air campaign also took on aspects of Network Centric Warfare as "more than half of aerial sorties began without targets in mind."[29] While a detailed description of what Network Centric Warfare will look like is still being developed; its outline will be framed by advancements in information technology.

---

[27] Ibid.

[28] U.S. Department of Defense, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," *Department of Defense Directive*, Number 4630.5, 5 May 2004, 15.

[29] David Talbot, "How Technology Failed in Iraq," *Technology Review* [online] 107, no. 9, (November 2004), (accessed 13 November 2004); available from http://lib3.tufts.edu:2065/itw/infomark/527/162/58749957w5/purl=rc1_GRGM_0_A124418914&dyn=5!xrn_41_0_A124418914?sw_aep=mlin_m_tufts.

21ST CENTURY ADVERSARIES

Background

In addition to the increasing urban character of the modern battlefield and influence of information technology on modern warfare, the nature of the adversary is changing. The likelihood that military forces will fight one another on a conventional battlefield has decreased since the end of the 20th Century. Dominance of western military capabilities against conventional military adversaries during Operation Enduring Freedom and Operation Iraqi Freedom has certainly reinforced this notion. Similarly, the relative impact of non-traditional adversaries is identifying new ways to challenge western militaries. This was vividly demonstrated by the September 11, 2001 attacks on New York and Washington D.C. as well as the attention these non-traditional military groups are receiving in Afghanistan and Iraq. The incentive for adversaries to fight in unconventional military ways will continue as long as they demonstrate relative effectiveness against western militaries. They don't necessarily have to defeat western militaries but prove they are more survivable than confronting western militaries conventionally.

Description

Concurrent with the rise of unconventional warfare is the rise of non-state armed groups. These groups are emerging as sub-state groups like insurgents and local terrorists as well as trans-national groups like international terrorists and jihadists. Their rise is partly the result of national government failures to satisfactorily, in the non-state armed group's eyes, address grievances and partly the result of increased globalization. They observe the ineffectiveness of organizing along military lines and challenging militaries conventionally. These non-state armed groups, using unconventional tactics, are increasingly becoming the primary adversaries to conventional military forces.

Non-state armed groups use a variety of tactics to challenge conventional military forces. They avoid confronting the military's harden forces directly and opt to attack more vulnerable targets when possible. If they choose to attack front line forces, non-state armed groups even the playing field by attacking at a time and in a manner of their choosing. Referred to as asymmetric, these tactics have proven to be effective ways to challenge conventional military forces.

Application

Asymmetric tactics often allow non-state armed groups to negate conventional military technological superiority. This technology has been focused to combat military forces in open combat. Increased range, lethality, survivability, and precision of weapons along with digital communications are typical manifestations of the technical superiority. By discarding uniforms or other easily identifiable clothing and equipment, armed groups can get within close range of western militaries before being noticed, negating the long range of many weapons. Increased lethality is countered by moving into urban areas or densely populated areas, which significantly increase the magnitude of collateral damage. The vertical and compartmentalized nature of the urban environment also negates the range of many weapons, as they cannot penetrate some buildings or turn around corners and may in fact penetrate multiple structures with a single shot.

Asymmetric tactics also counters the survivability of conventional weapons systems. The weapons are designed for direct and open combat. Accordingly, weapon systems enhance their survivability by protecting vulnerable areas. In direct and open combat, these vulnerable areas are typically the front facing areas. Protection is also afforded to side and rear facing areas, but it is to a lesser degree. Tops and bottoms of equipment, however, are lightly protected because they are not easily exposed in the type of warfare they were primarily designed to conduct. As

such, non-state armed groups use improvised explosive devices buried in roads along with mines to strike at the soft bottom of the frontline conventional weapon systems. Urban areas canalize traffic and limit avenues of approach as well as provide significant options to conceal these devices.

The precision of conventional weapon systems is similarly countered. While modern precision weapons can hit with an extreme degree of accuracy, they are designed to hit targets on the ground in open combat. The vertical relief of urban areas significantly complicates precision weapon employment. In order to strike a target in the urban canyons, the precision weapon must be released from a near vertical position, limiting the opportunity for engagement. Additionally, since precision weapons are designed to engage targets on the ground, they have a hard time engaging targets located within rooms of a multistory building without causing significant collateral damage.

Modern conventional militaries have also become increasingly reliant on digital communications. It allows forces to mass quickly and react to an adversary's moves particularly effectively in open combat. Non-state armed groups use asymmetric tactics to limit communication effectiveness. By blending into the local populace, it makes their identification difficult and thus limits the effectiveness of communicating an adversary's position. You cannot communicate information you do not know. Communication effectiveness is also limited by drawing conventional forces into urban areas. There, the vertical relief acts as barriers to radio signals. Radio signals require line of sight to operate effectively. Buildings obstruct that line of sight and degrade the signal strength of radios.

Another way the urban area negates the effectiveness of communication is through saturation. Urban areas require forces to operate in very close proximity. It also requires a high number of forces in order to be effective. When a large number of forces are concentrated into a relatively small area using communication equipment designed for open battlefields, the volume of communication generated can saturate a system. There may not be enough frequencies for the various elements to use, there may be too many nets to monitor effectively, or there may be too much information transmitted to process it.

Another aspect of the emerging threat from non-state actors is their ability to use the local populace as weapons. They can easily trigger a riot or instigate a peaceful crowd to turn violent. They can intimidate the local populace through violence, as they are not bound by regimes governing conduct like military forces are. Non-state armed groups can also us civilians as shields; increasing the potential for collateral damage should conventional military forces react.

The increased capabilities of western conventional military forces against conventional forces will lead adversaries to favor unconventional and asymmetric tactics. These adversaries will increasingly be non-state armed groups as governments in troubled areas continue to struggle and trans-national groups gain prominence with dissatisfied citizens. To address this aspect of the 21st Century, a merging of the Three Block War and Net Centric Warfare concepts may be helpful.

FALLUJAH CASE STUDY

Intro

Operations in Fallujah, Iraq provide a glimpse of how the Three Block War and Network Centric Warfare concepts can be applied to create results on the 21st Century battlefield. Fallujah, a stronghold for insurgent activity, has also been the sight of modern urban warfare. A

modern military force faced-off against an amalgam of sub-state and trans-national non-state actors in Fallujah. The modern force, trained in the Three Block War and equipped to fight the Network Centric War confronted a collection of determined non-military opponents. Both made use of technology and were influenced by real time access to information in the way of media reporting. Both sought to gain control of the city as part of a larger effort, the control of Iraq. Other cities in Iraq have very similar situations to Fallujah. Accordingly, all protagonists are learning as much as they can from that situation in preparation for future similar confrontations in Iraq or other trouble spots.

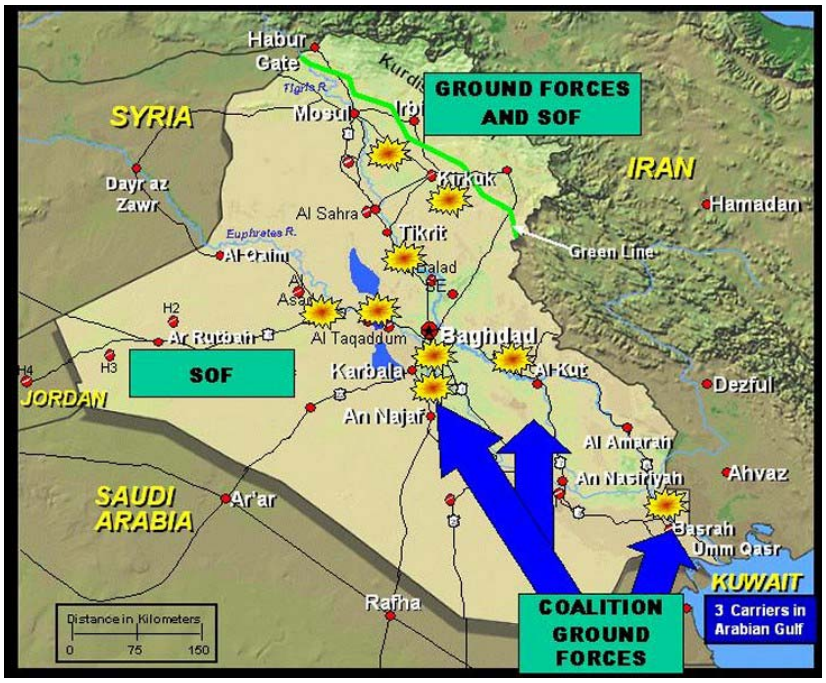

Figure 4. Coalition advance on Baghdad, 31 March 2004.[30]

The situation in Fallujah that eventually led to Operation Al Fajr started its Information Age catalyzed escalation on 31 March 2004. The seeds of the situation, however, were sown on 28 April 2003. On that day, coalition soldiers returned fire on a crowd of Iraqis demonstrating in

[30] "Operation Iraqi Freedom Maps: Mar 2003 OIF Maps," GlobalSecurity.org, (accessed 19 November 2004), available from http://www.globalsecurity.org/military/ops/images/030331-d-6570c-013.jpg.

front of a Fallujah school.[31] Up until then, the situation in Fallujah had been stable though tense. The coalition largely by-passed Fallujah during its "Shock and Awe" drive to Baghdad, figure 4. Special Operations units captured the city in early April but left by the middle of the month "leaving a power vacuum in the city until the 82nd Airborne's arrival [25 April 2003],"[32] figure 5.

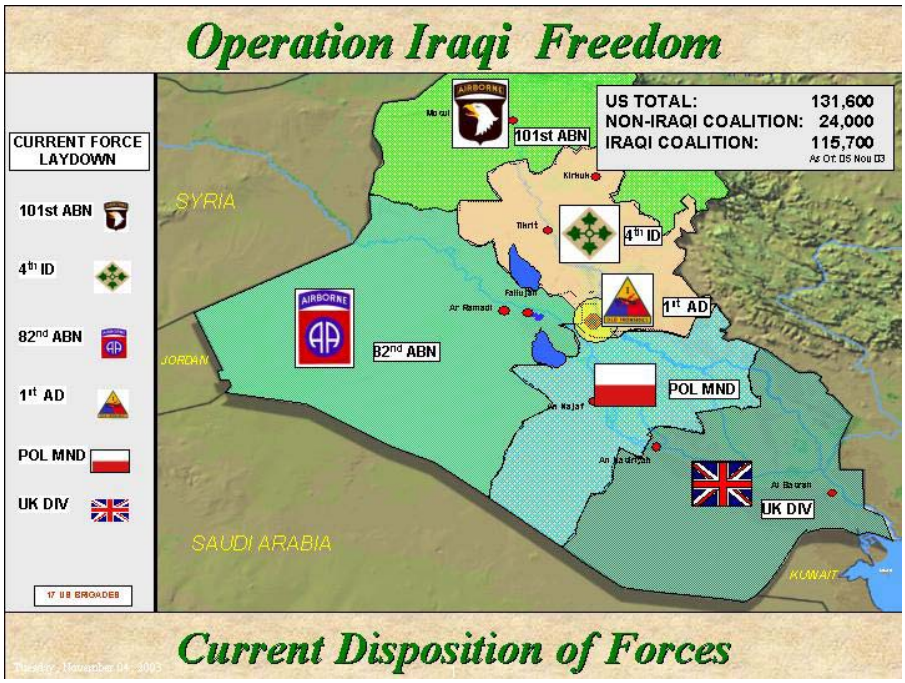

Figure 5. Coalition Forces Disposition November 2003.[33]

Background

Fallujah has had a history of relative autonomy. During Saddam's reign, Fallujah continued to enjoy relative autonomy as long as it supported the regime and did not work against it. The special relationship with the government gave the city's tribal and religious leaders substantial power and privilege. With the fall of Saddam's regime and the ensuing national power vacuum, they were not eager to relinquish control of the city to the coalition. The resulting tension quickly led to confrontation between the Fallujah residents and coalition forces. The initial

[31] United States Central Command, "Soldiers Come Under Fire in Fallujah," *CENTCOM News Release*, 29 April 2003, release number: 03-04-205.

[32] Rajiv Chandrasekaran, "Troops Kill Anti-U.S. Protesters," *The Washington Post* [online], 30 April 2003, (accessed 10 October 2004); available from LexisNexis.

confrontations between the residents and the coalition took the shape of demonstrations. On the evening of 28 April, however, this changed as gunfire was exchanged resulting in over a dozen Iraqi fatalities "and as many as 75 wounded."[34]

Over the next year, violence continued to shape the interaction between the coalition and Fallujah. The result was increased detachment and resentment between the two elements. Coalition forces responsible for Fallujah increasingly used a heavy hand when responding to situations in and around the city. The "sealing off of villages with barbed wire, firing artillery at guerrilla positions or using bombers to destroy suspected insurgent strongholds"[35] became some of the tactics used. At the same time, the strength and power of armed groups grew as lawlessness prevailed in the city. Saddam Hussein loyalists, transnational Wahhabi Sunni Muslim extremist and local Wahhabi Sunni Muslim extremist armed groups, collectively referred to as the Fallujah Resistance, eventually dominated the city making Fallujah too dangerous for coalition presence by the end of summer. In an effort to ease some of the tensions in Fallujah and regain control of the city, the First Marine Expeditionary Force (I-MEF) was deployed to the Al Anbar province when the 82nd Airborne Division's rotation time arrived.

In anticipation of the transfer of authority and in an attempt to quickly establish their dominance, anti-coalition forces increased their attacks. The Fallujah Resistance sought to demonstrate its authority in Fallujah and discourage any disruption to the status quo. They also sought to discredit the U.S. Marine Corps, which had developed a fierce fighting reputation during the combat phase of Operation Iraqi Freedom (OIF-I) as well as a competent stabilizing

---

[33] "Operation Iraqi Freedom Maps: Nov 2003 OIF Maps," GlobalSecurity.org, (accessed 19 November 2004); available from http://www.globalsecurity.org/military/library/news/2003/11/031106-d-6570c-002.jpg.

[34] Ibid.

[35] Richard Beeston, "Marine put Sensitive Side on Hold," *The Times (London)* [online], 2 April 2004, (accessed 29 September 2004); available from LexisNexis.

force once fighting ended. Their ability to destroy Iraqi military resistance on the drive to Baghdad had left a mark on much of the anti-coalition forces, as did their ability to establish relative order in the southern sections of Iraq. Despite the spike in violence, the transfer of authority took place on 24 March 2004,[36] one week before the ambush of the Blackwater Security Consulting (Blackwater) contractors that triggered the crisis in Fallujah. The ambush marked the beginning of the sequence of events culminating in Operation Al Fajr, figure 6.

Figure 6. Blackwater Security Consulting ambush and mutilation 31 March 2004.[37]

Overview

I-MEF took responsibility for the security and stabilization of Fallujah when it assumed control of the Al Anbar province in the 24 March 2004 transfer of authority ceremony with the 82nd Airborne Division, figure 7. Lieutenant General James Conway, I-MEF's Commanding General, had been preparing for the challenges associated with the province in general and

[36] Sgt Colin Wyers, "I MEF Takes Command In Western Iraq." *USMC News*, 25 March 2004. Story identification number: 2004325155339.

Fallujah in particular since November 2003 when he was informed I-MEF would be returning to Iraq. I-MEF studied the lessons learned by the 82nd Airborne as well as those learned from OIF-I as it formulated its plan.

The approach developed for both OIF-I and I-MEF's return to Iraq (OIF-II) was anchored in the Three Block War. I-MEF was able to attain notable success in both the combat and stability phase of OIF-I with this approach. To build on OIF-I's successes, it modified this approach for OIF-II, taking into account the specific situation in the Al Anbar province. Within days of I-MEF's formal assumption of responsibility for the Al Anbar province, I-MEF's approach was put to the test by developments in the town of Fallujah.

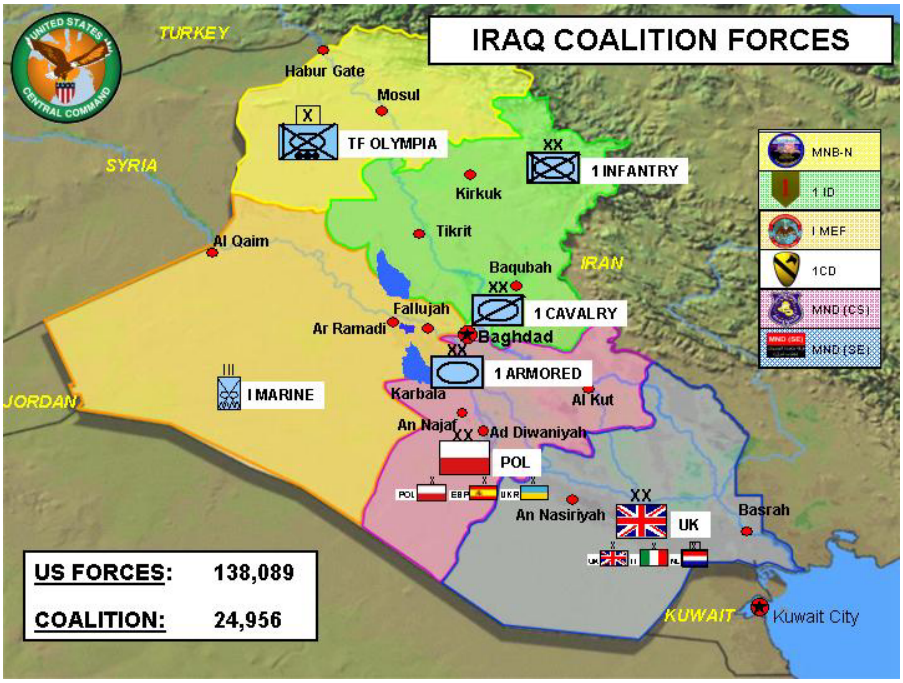

Figure 7. Coalition Forces Disposition April 2004.[38]

[37] Khalid Mohammed, *Associated Press*, (accessed 16 October 2004); available from http://www.poynterextra.org/cp/AP.jpg.

[38] "Operation Iraqi Freedom Maps: Apr 2004 OIF Maps," GlobalSecurity.org, (accessed 19 November 2004); available from http://www.globalsecurity.org/military/ops/images/040430-d-6570c-006.jpg.

Strategy

I-MEF developed a plan that would address both the strategic threats and tactical threats. At the strategic level, I-MEF understood it had to find a way to bring the leaders and citizens to accept a new Iraq and become involved in building the institutions and developing the character of the newly liberated Iraq. At the tactical level, I-MEF knew it had to establish security and stabilize its zone. The Three Block War approach provided a framework with which to accomplish both. Concepts and systems developed for Network Centric Warfare provided I-MEF with new tools to incorporate into its plan.

In the months of preparation leading up to OIF-I, I-MEF identified six critical tasks it would have to perform as combat operations gave way to stability operations (Phase-IV). These tasks were: Security, Governance and Administration, Rule of Law, Humanitarian Assistance, Infrastructure Recovery, and Perception Management, figure 8.[39] Of these tasks, only security can be considered a traditional military function, though much of it is more suited for law enforcement than military forces. I-MEF, however, understood it would have to fulfill all six functions during Phase-IV of OIF-I. These same six tasks remained relevant for OIF-II.

I-MEF Critical Tasks for OIF-I Phase-IV

Security
- Secure base clusters, religious and cultural sites, sensitive sites, mass graves
- Establish and monitor local police forces
- Collect and secure Iraqi arms and munitions
- Secure border crossings
- Protect key civilian infrastructure

Governance and administration
- Manage and disburse money to Iraqi government employees
- Transition Governorate Support Team activities to CPA Local Governance Teams
- Transition Civil Military Operations to CPA agencies

Rule of law
- Enforce the policies promulgated by CJTF-7
- Facilitate the establishment of an interim Iraqi judicial system

Humanitarian assistance
- Support NGO/IO humanitarian assistance operations (food, water, shelter, medical)

Infrastructure recovery
- Protect oil infrastructure
- Initiate restoration of power, water, sewage, medical and educational facilities
- Facilitate improvements to key Lines of Communication

Perception management
- Communicate I-MEF intent, policies, and procedures to the Iraqi people

[39] Col Christopher J. Conlon, USMC (Retired), "Preparing I-MEF for Operation Iraqi Freedom I," telephone interview with author, 2 Mar 2005.

Figure 8. I-MEF Critical Tasks for OIF-I, Phase-IV

I-MEF is primarily an operational level of war entity. It facilitates those units operationalizing strategy and policy with various levels of support. Using the Three Block War as a backdrop to the Marine Corps' doctrine enabled operational level commands within the Marine Corps, like I-MEF, to develop the skills required to analyze the battlefield in new ways and identify appropriate support requirements. This is how I-MEF was able to identify the six critical tasks for OIF-I Phase-IV. I-MEF, however, was a military command with limited resources optimized to carry out and implement Phase-IV's critical tasks.

Once I-MEF identified its deficiencies with regard to the critical tasks for Phase-IV, it asked for assistance through the chain of command. The pace in which events related to Iraq unfolded, however, significantly compressed the timeframe I-MEF had available to wait for solutions. The time pressure combined with a myopic focus on combat operations by decision makers frustrated the identification and allocation of appropriate resources to I-MEF so it could perform the tasks it had identified. As a result, I-MEF was forced to devise a strategy, while preparing for combat operations, which provided for the six critical tasks using only organic elements within the Marine Corps.

The framework of the strategy developed for OIF-I Phase-IV was the same for OIF-II. It centered on garnering local support. Building local support, however, was directly linked to I-MEF's ability to perform or facilitate basic services. These basic services were articulated in I-

MEF's six critical tasks. During OIF-I Phase-IV, I-MEF's strategy translated into an ad hoc plan executed by battalion commanders. Its success was based in large part on the ethos of the Marine Corps instilled by its internalization of the Three Block War concept. I-MEF's zone was not only stable during OIF-I Phase-IV, but the local leaders had developed a strong constructive working relationship with I-MEF.

In preparing for OIF-II, I-MEF sought to develop a similar relationship with the leaders in Al Anbar province. It recognized the situation in Iraq as a burgeoning insurgency. The developing situation in Al Anbar province had many of the same destabilizing conditions and precipitants I-MEF worked to eliminate during OIF-I Phase-IV. Accordingly, I-MEF built its counter-insurgency strategy around OIF-I's six critical tasks.

Learning from the lessons of OIF-I, I-MEF hedged its limited resources, the same ones identified during planning for OIF-I, by assigning liaison officers directly to the various agencies best suited for the relevant tasks. Though I-MEF disregarded standard protocol by working directly with civilian government agencies in Iraq, its desire for successful mission accomplishment and applicable lessons learned from OIF-I Phase-IV warranted the move. In addition to U.S. and Iraqi government agencies, I-MEF was able to tap into and to a very limited extent coordinate with Non-Government Organizations.

Preparation

In order to successfully implement its strategy, I-MEF and its major subordinate elements developed appropriate tactics and training. Like the strategy, the tactics and training for OIF-II built on the successes from OIF-I. At the tactical level, I-MEF Marines developed and implemented a training package based on skills emphasized in the Three Block War. Marines honed their MOUT skills with focused live fire training at numerous urban training centers.

They augmented the live fire training, which focused on small unit and individual actions, with urban training at the vacated March Air Reserve base-housing complex. This allowed the Marines to practice integrating their small units into larger units through realistic scenarios. It provided the larger unit commanders an opportunity to refine procedures to process the vast amounts of information produced on the modern battlefields as well as incorporate lessons learned.

Concurrent with individual skills training was the deployment and integration of new equipment. The equipment included weapon optics, miniature radios, hand held unmanned aerial vehicles, command and control systems, and protective gear to name a few. The main driving force behind the new equipment was mission analysis. Members within I-MEF's operating forces quickly identified specific tasks they potentially needed to accomplish and the corresponding equipment that would facilitate accomplishing those tasks. As a result, over sixty urgent Universal Need Statements (UNS)[40] were forwarded from I-MEF to its higher headquarters for OIF-I and over twice that for OIF-II.[41] Some of the urgent UNS were satisfied with equipment that was already in the procurement pipeline, like the handheld Dragon Eye UAV, figure 9. The Dragon Eye UAV program was simply accelerated. Other pieces of equipment were items already identified but not yet developed. The Personal Role Radio (PRR) allows small unit members to communicate with each other and is a function of the future Joint Tactical Radio System, which is still in development phase. The capability, however, exists in

[40] The Universal Need Statement is "the primary means of entry into the EFDS [Expeditionary Force Development System], the UNS acts as a "work request" for current and future capabilities. The UNS identifies operational enhancement opportunities and deficiencies in capabilities. Opportunities include new capabilities, improvements to existing capabilities, and elimination of redundant or unneeded capabilities." United States Marine Corps Combat Development Command, available from, https://www.mccdc.usmc.mil/OpsDiv/CAPASSESSBR/uns.htm.

stand-alone radios fielded by law enforcement units and British forces. In order to fulfill the inter-unit communication requirements identified to fight in the Three Block War, commercially available PRRs were purchased. Lastly, some equipment had not been part of the procurement system and was developed specifically in response to the urgent UNS process. This includes armor for soft skinned vehicles like High Mobility Multi-Wheeled Vehicles (HMMWV or Humvee). Regardless of the equipment source or availability, the only gear provided was the gear requested by operators.

Figure 9. Dragon Eye UAV.[42]

The types of equipment requested for OIF-I and OIF-II were similar. Some were the result of lessons learned and others were the result of recent production and technological advancements. The immediacy of I-MEF's deployments to Iraq for both OIF-I and OIF-II prevented acquisition and fielding of new equipment through normal processes. As a result, the scenario based training at March Air Reserve Base served as the test bed to develop effective techniques of using the new equipment. The training allowed unit commanders to develop employment

[41] Numbers of urgent UNS processed for OIF and OIF-II is a distillation of information derived from various I-MEF, Marine Corps Combat Development Command, Marine Corps Warfighting Lab, and Marine Corps System Command interviews.

[42] Lance Cpl. Matthew K. Hacker, PhotoID: 2005120104811, available from, http://www.usmc.mil/marinelink/image1.nsf/Lookup/2005120104811.

methods for the new equipment and train individuals to sift through the volumes of data the equipment made available to identify critical information in a timely fashion. Procedures and experimentation continued while deployed as Marines continued their scenario-based training at deployed camps in preparation for directed action.

The Three Block War is not simply focused on combat operations. The Marines' training package included cultural training, language training, and Combined Action Team training. Several academics were recruited to provide the cultural training. The U.S. Naval Postgraduate School's Center for Contemporary Conflict's Assistant Professor Dr. Barak Salmoni conducted much of the cultural training for ground forces. Most Marines were taught basic Arabic phrases as part of their training package while select individuals were sent for immersion Arabic training with the Defense Language Institute. This training was in line with the tenets of the Three Block War, which recognizes situations in urban areas can quickly escalate as a result of simple misunderstandings.[43] Understanding the culture of the people and having the ability for basic communication with them significantly reduces the likelihood of misunderstandings.

Through the training package, small unit leaders refined their decision-making skills. The Three Block War emphasizes the important role decisions at the small unit level have on the big picture. Poor decisions can quickly escalate into international crises as a result of the global media. For instance, a small unit leader's decision to take a shot at an insurgent in a crowded market area can trigger an international situation if civilians are also shot in the process. Similarly, good decisions at the small unit level can diffuse potentially escalatory situations. Using the earlier example, a small unit leader's decision to run through the crowded market area

[43] One of the cultural lessons learned and subsequently applied was that Iraqis believed that the sunglasses worn by service members had the ability to see through clothes. This offended many Iraqis who thought the service

to apprehend an insurgent can reinforce the message that he is primarily there to help, not harm. In order to make good decisions, however, small unit leaders must understand the context within which they are making decisions. I-MEF's training package focused on providing that context to small unit leaders as well as refining their skills required to successfully implement the decisions made.

Application

While small unit decision-making is an important component to success in the Three Block War, it is not the only one. I-MEF developed a strategy to assuage some of the simmering ethnic, nationalist, and economic tensions in Fallujah. In order to accomplish this, I-MEF sought to capitalize on techniques used during OIF-I Phase-IV and take a softer approach than the approach taken by the 82nd Airborne Division. Before tensions could be reduced, the ability for dialogue and communication needed to be established between the Marines and Fallujah. The deteriorating situation in Fallujah had led the 82nd Airborne Division to minimize this dialogue and replace it with military action. To reverse this trend, I-MEF developed a Combined Action Program modeled after the similarly named program used during the Vietnam conflict.

The Combined Action Program consisted of teams of Marines who would enter into Fallujah with the goal of setting up cooperative partnerships. The objective was to establish dialogue and communication by initially providing services to the city. The services would be provided by a combination of military and civilian projects. Military medical professionals would provide basic medical care while money and supplies would be made available to civilians so they could repair basic infrastructure. Other services included training the Fallujah police and National Guard, as well as distributing relief and school supplies. I-MEF purchased soccer balls and

---

members intentionally used these sunglasses to look at the Iraqi women. As a result, Marines were not authorized

Frisbees to distribute to kids as another way to establish lines of communication and trust with the local populace. As the Combined Action Teams established dialogue, they would wrestle control away from armed groups, contributing to stability in the process.

Through the various levels of interaction spearheaded by the Combined Action Teams, the tensions would be reduced. In the process of carrying out the various projects, local residents would be exposed to Iraqi government officials with different ethnic backgrounds. Interaction with people of different backgrounds aimed to reinforce the notion that everyone was working together towards a greater Iraq composed of people with various ethnicities. Fallujah residents would also be able to see first hand that the coalition's goal was a free Iraq and not control of its people and resources by coalition nations. The focus on Iraqi freedom aimed to relieve some of the nationalist tensions. In funding local projects, I-MEF provided money to Fallujah, alleviating some of the economic tensions, which were particularly important. The armed groups were able to take advantage of the economic situation by paying people to conduct attacks against the coalition. The jobs created by I-MEF plan thus aimed to eliminate much of the support to the armed groups. In reducing these tensions, I-MEF sought to reduce the potential for international crisis in Fallujah by minimizing many of the causes and sources.

---

sunglasses when operating around Iraqis and were told the reasons why.

Adjustments

Figure 10. Ambush of Blackwater Security Consulting convoy 31 March 2004.[44]

I-MEF's plan for OIF-II, however, was derailed by the events of 31 March 2004. The ambush on the Blackwater contractors, figure 10, by the Fallujah Resistance created pressures for an immediate, unambiguous, and decisive signal that such actions were intolerable. Responding to the ambush, the coalition took up positions around Fallujah and demanded that those responsible for the ambush be handed over. The White House issued statements condemning the ambush and mutilations,[45] as did the Coalition Provisional Authority.[46] Fallujah citizens responded to this with demonstrations and rhetoric supporting the ambush but not the mutilation. Religious leaders within Fallujah issued statements "condemning the mutilation of

[44] "31 March 2004 - Fallujah, Iraq - American civilians burned & mutilated," (accessed 20 November 2004); available from http://www.mitchell-tapping.com/images/31_march_2004__fallujah_iraq/capt.sge.dev91.310304152830.photo01.default-384x256.jpg.

[45] Scott McClellan, transcript of "White House Press Briefing," 31 March 2004 [online], (accessed 16 October 2004); available from http://www.whitehouse.gov/news/releases/2004/03/20040331-4.html.

[46] BGen. Mark Kimmitt and Dan Senor, transcript of "Coalition Provisional Authority Briefing," 1 April 2004 [online], (accessed 16 October 2004); available from http://www.iraqcoalition.org/transcripts/20040401_Apr1_KimmittSenor.html.

the bodies of four U.S. civilians killed … but they stayed silent about the attack itself."[47] Supporters sympathetic to the Fallujah Resistance triggered increased tensions in other cities around Iraq, figure 11. As tensions escalated, violence continued, and political pressure mounted, the hopes for returning to I-MEF's soft approach diminished.

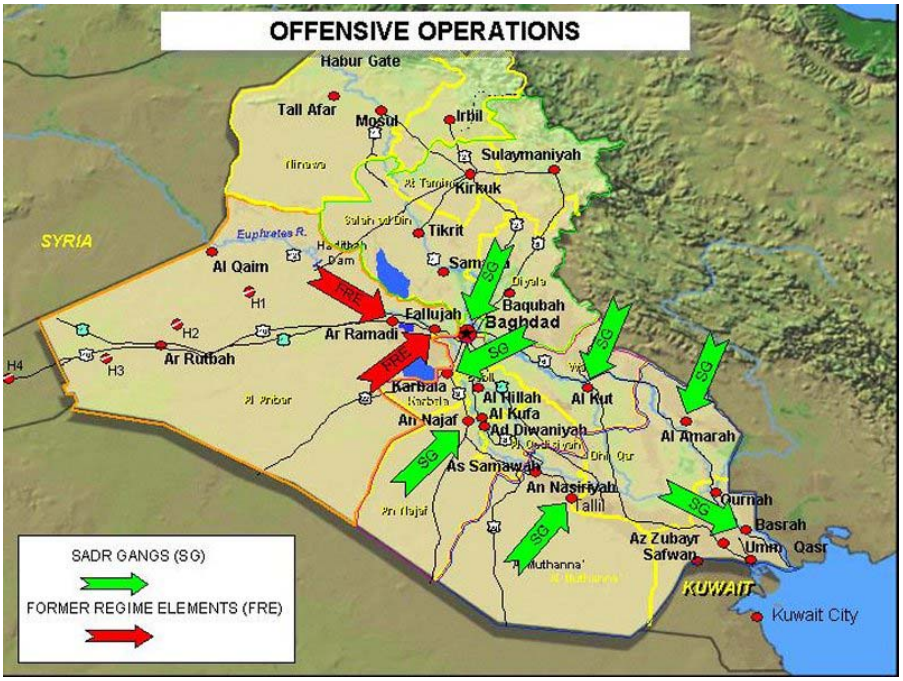

Figure 11. Rising violence in Iraq. Disturbances on 7 April 2004.[48]

Operation Vigilant Resolve commenced on 5 April 2004 as dialogue turned to ultimatum and marked I-MEF's departure from its counter-insurgency strategy for Fallujah.[49] The coalition refused to back away from its demands that those responsible for the 31 March ambush be turned over. The city of Fallujah refused to cooperate. Moreover, the resulting tensions enabled the Fallujah Resistance to strengthen their power, doing away with the remaining vestiges of law and

[47] Jefferey Gettleman, "Fallujah religious leaders condemn mutilation of Americans, not ambush," *San Diego Union Tribune* [online], 3 Apr 2004, (accessed 26 September 2004); available from http://www.signonsandiego.com/uniontrib/20040403/news_1n3iraq.html.

[48] "Operation Iraqi Freedom Maps: Apr 2004 OIF Maps," GlobalSecurity.org, (accessed 19 November 2004); available from http://www.globalsecurity.org/military/library/news/2004/04/040407-d-6570c-001.jpg.

order. As a consequence, the CPA directed the coalition to commence offensive combat operations to reclaim the city.

As tensions quickly built between 31 March and 5 April, tremendous amounts of information from numerous sources were pumped to various decision makers. The CPA, coalition, and I-MEF had to quickly process information made available from human intelligence, national intelligence, informants, media, and situation reports. I-MEF's planning and preparation efforts gave them an advantage in that they were already familiar with much of preconditions in Fallujah allowing them to quickly analyze precipitants to Operation Vigilant Resolve. The CPA and coalition headquarters, on the other hand, had a bigger picture view and therefore took longer to process and place into context much of the specific and particular information about Fallujah that was made available. As a result, I-MEF developed a different assessment of the situation than the CPA with a correspondingly different solution.[50] Political pressure combined with a rapidly deteriorating situation further complicated information processing. The CPA did not have the time or resources to reconcile the different assessments. It had to rely on its assessment, which directed offensive action be taken. Receiving its orders, I-MEF proceeded with Operation Vigilant Resolve.

The availability of real-time information on the 21st Century battlefield also played a role in stopping Operation Vigilant Resolve. I-MEF's urban warfare skills training prior to deployment paid off. The Marines quickly gained the upper hand in part due to their ability to process and use information on the battlefield faster than the Fallujah Resistance. New optics like the Advanced Combat Optical Gunsight (ACOG) allowed Marines to identify and engage

[49] GySgt Mark Oliva, "Pendleton Marines cordon Fallujah," *USMC News*, 6 April 2004, story identification number: 20044674726.

combatants at long range. PRRs enabled Marines to synchronize their movements to take advantage of fleeting opportunities provided on the streets of Fallujah. UAVs provided persistent real-time video surveillance to maneuver forces.

Anti-coalition forces also used information effectively. They were able to counter I-MEF's tactical information dominance with strategic information dominance. The lopsided victories of the Marines against the armed groups within Fallujah were portrayed as slaughters and inhuman, generating cries against the coalition. Pressure mounted within Iraq and among the coalition to stop what some international media outlets were portraying as a massacre.[51] The ensuing pressure generated a ceasefire and brought the parties to the negotiating table within five days, a situation favorable the Fallujah Resistance.[52] The combat effectiveness of I-MEF Marines was therefore neutralized.

The resulting ceasefire placed I-MEF in a precarious situation. They could not withdraw in the event the ceasefire failed, should they were ordered to resume the offensive, nor could they attack. The ceasefire also served as a magnet for international media coverage. Reports with varying view points and worldwide viewers flocked to the area to cover the unfolding situation. The result was I-MEF forces observing a ceasefire in close proximity to Fallujah Resistance fighters using the ceasefire to re-supply and regroup all under the watchful eye of the media. Fallujah Resistance fighters repeatedly attempted to draw I-MEF forces to violate the ceasefire by instigating firefights and attempting to have the Marines engage non-combatants. I-MEF had

---

[50] Rajiv Chandrasekaran, "Key General Criticizes April Attack In Fallujah; Abrupt Withdrawal Called Vacillation," *The Washington Post* [online], 13 Sep 2004, (accessed 10 October 2004); available from LexisNexis.

[51] Scott Wilson, "In Mideast, Anger and Solidarity; Arabs Praise Iraqi Insurgents, Condemn U.S. Occupation," *The Washington Post* [online], 10 Apr 2004, (accessed 20 October 2004); available from LexisNexis.

[52] BGen. Mark Kimmit and Dan Senor, transcript of "Coalition Provisional Authority Briefing," 9 April 2004 [online], (accessed 16 October 2004); available from http://www.iraqcoalition.org/transcripts/20040409_Apr9_KimmittSenor.html..

to rely on the discipline and judgment of its small unit leaders to act appropriately and in accordance with the terms of the ceasefire. An overreaction or misplaced shot by a young Marine could discredit the fragile peace created by the ceasefire.[53] Fortunately, I-MEF Marines were ready for this situation as a result of training and indoctrination into the Three Block War.

Negotiations during the ceasefire resulted in the termination of Operation Vigilant Resolve and creation of the "Fallujah Brigade" to restore order to the city. The brigade consisted of former Iraq military personnel who volunteered to reconstitute their unit and work for coalition forces.[54] They were loyal to the IGC, in concept, and were placed under the operational control of I-MEF, who had responsibility for the city. The Fallujah Brigade was given responsibility for security and stability within the city. This allowed I-MEF to resume its counter-insurgency strategy and stand down from the resource intensive urban combat. Marines quickly transitioned back to stability operations in support of the counter-insurgency. The ability to transition seamlessly between combat and security operations is another aspect of training for the Three Block War.

Initially, the Fallujah Brigade showed limited success in their ability to control the city. This, however, quickly ended as members of the unit began openly supporting armed anti-coalition groups within Fallujah. Allegiance to the IGC quickly gave way to allegiance to the brigade's commander. By the beginning of September 2004, it became readily apparent that the Fallujah Brigade was more of a problem than solution and was disbanded.[55]

---

[53] Marines are never denied the right or obligation for self-defense. As a result, numerous situations arose where Marines acting in self-defense would shot at anti-coalition forces even during a ceasefire.

[54] The Iraqi military was disbanded by the coalition.

[55] Brian Dominick, "'Fallujah Brigade' to Disband, Join Resistance in Control of City," *The New Standard* [online], 12 September 2004, (accessed 2 November 2004); available from http://newstandardnews.net/content/?action=show_item&itemid=977.

The situation within Fallujah started to deteriorate quickly. A power struggle among the disbanded Fallujah Brigade, Fallujah Resistance, and Fallujah tribal leaders ensued. The Fallujah Brigade's power, its ability to control information, was quickly eroding. When it was working for the IGC, the Fallujah Brigade controlled most of the interaction with the city. The IGC and I-MEF would coordinate through the Fallujah Brigade to set up meetings inside the city as well as arrange for the distribution of supplies. That information armed the Fallujah Brigade, giving it a sizeable amount of control over the various factions within the city. The Fallujah Resistance also sought out much of the same information. On occasion, the Fallujah Brigade provided information to selected elements of the Fallujah Resistance. Elements of the resistance aligned with the brigade would be given information to mount harassing attacks (the Fallujah Brigade did not want to trigger large scale retaliation). Elements that were potential threats to the brigade would be set up for counter-attacks. The Fallujah Brigade would provide them with information on coalition action then alert the coalition to a potential attack triggering raids. These raids not only eliminated potential rivals to the Fallujah Brigade, but also helped maintain their relationship with an increasingly skeptical IGC and I-MEF.

The disbanding of the Fallujah Brigade eliminated its access to information. It no longer had power over the various factions within Fallujah or the IGC. The Fallujah Resistance was able to increase operations, as it no longer had to contend with a duplicitous Fallujah Brigade. Individual soldiers from the disbanded brigade had to decide whether to stay in a Fallujah hostile to them, join the resistance, join the coalition, or simply melt back into society. Increasingly they chose to join forces with the Fallujah Resistance, openly challenging I-MEF forces on several occasions.

As the situation in Fallujah threatened to devolve into chaos, the Interim Iraqi Government's (IIG) and coalition were left with very limited options.[56] The IIG and coalition were aware of the Fallujah Brigade's opportunistic behavior early on but allowed it to continue because it did not have a fallback plan for Fallujah short of combat. By keeping a close eye on the situation, the IIG and coalition hoped to buy time for the development of an alternate solution.

The Fallujah Brigade actually turned out to be an impediment to the solution in other ways. They were able to manipulate the contact between the government and elements within Fallujah, effectively silencing most of the potential solutions that called for the withdrawal of the Fallujah Brigade. With the brigade out of the way, the IIG was able to establish direct lines of communication with moderate factions within Fallujah and work with them to try and find a viable solution to the problem. Over the period of two months, the IIG negotiated with representatives from Fallujah.

During negotiations, information once again became a weapon. As radical members inside Fallujah became aware of the negotiations, they worked against them. They did so by increasing the level of violence against I-MEF and coalition forces to discourage any interference. They also attempted to garner broader support within Iraq by portraying the negotiations as submission to U.S. domination and not as positive steps towards a new Iraq.

The IIG and coalition, having learned the value of strategic information warfare from Operation Vigilant Resolve, also worked to garner broad support to pressure Fallujah to handover terrorists. In this effort, they released information related to coalition hostage torture

[56] On 28 June 2004, the Coalition Provision Authority turned over control of Iraq to the Interim Iraqi Government. Iraq was once again a sovereign nation. Source is President George W. Bush transcript of "President Bush Discusses Early Transfer of Iraqi Sovereignty" 28 June 2004., (accessed 2 November 2004); available from http://www.whitehouse.gov/news/releases/2004/06/20040628-9.html.

chambers and terrorist safe houses located within Fallujah. I-MEF worked to translate the tactical information advantages gained through persistent UAV coverage, signal interception, situation reports, and human intelligence reports into strategic information advantage.[57] It sought to prepare a potential global audience for the return to urban combat and avoid the pressure to prematurely stop operations such an audience can create. In releasing credible information about Fallujah operations by Iraq's most wanted terrorist, Abu Musab al-Zarqawi, IIG and the coalition diffused much of the rhetoric being used by radical elements within Fallujah.

Throughout this period, I-MEF prepared to once again halt its counter-insurgency strategy and resumed urban combat. They knew the fighting would require a large percentage of the Marines and soldiers in Al Anbar province despite the availability of high technology weapons and systems. While technology advancements allowed for tremendous capabilities to destroy targets with extreme precision, there were significant limitations to identifying targets. While modern technology developed weapons that could kill just about anything anywhere, the technology did not develop the ability to tell us if we should kill a particular target or not. This point was emphasized in the middle of April over Fallujah. An U.S. Air Force F-16 conducting a routine patrol over Fallujah identified a large group moving down the city's main street towards a Marine checkpoint. The images the pilot saw were transmitted to decision makers for authorization to fire. The scene resembled a large mob moving decisively towards a confrontation. As a result of recent hostilities with Operation Vigilant Resolve, it was assessed the mob was dangerous. The F-16 pilot received authorization to engage, dropping two five hundred pound laser guided bombs on the mob. As the mob dispersed, a quick reaction force was sent towards the impact to gather intelligence. As they arrived, they discovered that the mob

[57] Cpl Paul Leicht, "VMU-1 Pioneer UAV provides 'birds eye' view of combat zone," *USMC News*, 17

was actually a herd of sheep that a shepherd was moving through the city. Eyes on the ground would have been able to identify that.

Preparations for the second offensive into Fallujah included scenario based training focused on decision-making at small unit levels. Small unit leaders would be the center of gravity in the upcoming, globally covered fight. A bad decision on their part, transmitted to millions of viewers, could not only spark violent action within other regions of Iraq, but could further erode international support to the IIG and coalition. Consequently, small unit leaders worked through various scenarios where they would have to make split second decisions on whether to shoot or not shoot. In order to support the small unit leaders, I-MEF worked with the IIG to evacuate as many people from Fallujah as possible, working on the assumption that those who stayed wanted to fight. It accepted the risk of having anti-coalition fighters evacuate with the non-combatants. While those fighters that fled would survive to fight another day, their base of support, Fallujah, would no longer provide them a means of support and security.

The coalition could not only concentrate on preparing to fight in Fallujah, however. The limited number of combat forces required security operations to continue. I-MEF forces, responsible for the entire Al Anbar province, could not afford to solely dedicate forces to the upcoming Fallujah fight. The forces assigned to Fallujah would have to split their operations between preparation and security. While the IIG coordinated the evacuation of non-combatants, I-MEF worked to prevent the infiltration of additional anti-coalition forces. They also worked to continue developing intelligence on disposition of anti-coalition forces inside Fallujah. This intelligence was collected using a combination of technology and people. Foot patrols would

---

September 2004, story identification number: 200492132448.

maneuver to specific areas to confirm, update, and develop information that a technical sensor identified.

Anti-coalition forces did not sit idly by during this time frame. They also made preparations and continued to harass coalition forces. The Fallujah Resistance worked to stockpile ammunition and supplies throughout the city. They erected barricades and barriers in an attempt to channel coalition forces to ambush sites. Anti-coalition forces built and emplaced improvised explosive devices (IED) along likely avenues of approach. They did not limit their activities to Fallujah as they continued to harass coalition forces with indirect fire, suicide attacks, and IED attacks. I-MEF forces made appropriate adjustments to limit the effects of these attacks, minimizing their damage and instigation potential.

As both sides prepared for an eventual confrontation, it was evident the IIG was able to establish a level of information dominance that it did not have when the Blackwater contractors were ambushed. On 31 March, the coalition was forced to react to a deteriorating situation without having the time or resources to process the relevant information. This led to a hasty decision to abandon the counter-insurgency plan for Fallujah and replace it with an urban offensive. As the offensive unfolded, anti-coalition forces retained information dominance and were able to use it to stop the offensive before it crippled them. This was not the case as the IIG negotiated with Fallujah elements and prepared for its offensive. It was able to manage the information so that it decided the time and date of conflict.

By the end of October 2004 it became apparent negotiations were failing. The inability to find a compromise position resulted in Operation Al Fajr. Moderate leaders within Fallujah were not able to convince radical elements to turn in suspected anti-coalition forces. The IIG was

unwilling to meet the demands of the radical elements. The race to control information heated up. With U.S. federal elections scheduled for 2 November 2004, anti-coalition forces were pressing to have negotiations end and hostilities commence by the end of October. The IIG drove to end the negotiations on its terms and maintain control of the situation worked to delay hostilities at least until after the U.S. federal elections. Had hostilities commenced prior to the U.S. federal elections, tremendous political pressure could have wrestled some control away from the IIG.

On 8 November 2004 the IIG directed coalition forces to begin Operation Al Fajr and regain control of Fallujah. Applying some of the Three Block War's tenets, the plan to re-take Fallujah involved media management through information control. To this effect, the coalition initiated the operation by seizing the Fallujah General Hospital in the western part of the city. During Operation Vigilant Resolve, this hospital was a primary source of anti-coalition information. The Fallujah Resistance claimed that coalition forces were committing atrocities by broadcasting images from this hospital. The images could not be verified. Based on the tactics used by the armed groups, there was a high probability that the images broadcast were used out of context. IIG control of the hospital would ensure that hostile forces could not repeat this tactic, denying them a source of unverifiable information to generate the pressure to halt the operation.

I-MEF forces also exploited their tactical information dominance. Small unit leaders used PRRs to coordinate their action as they pushed through Fallujah. As a result, there were no friendly fire incidents between units on the ground despite the close proximity to one another, high tempo of operations, and confusing streets and alleys. I-MEF, acknowledging the critical role the small unit leader played, worked to provide him with appropriate information and support. Persistent UAV coverage provided information concerning movement of people. Close

air support provided precise heavy firepower for targets identified by the Marines and soldiers on the ground. Blue Force tracker, a satellite-based tracking and communication system, enabled higher levels of command to maintain accurate situation awareness and monitor the progress of combat from their combat operations centers. The ability of the combat operations centers to maintain accurate information alleviated some of the time consuming position and situation reporting from small unit leaders. The training and preparation enabled I-MEF forces to fuse technological advancements to their Three Block War and apply it decisively.

The IIG and coalition not only managed information and exploited tactical information dominance, but also prepared for potential negative media events. They did not want to lose the initiative as they did during Operation Vigilant Resolve. A test to their preparation came on 13 November 2004 when a Marine killed a wounded enemy combatant in a mosque.[58] The incident was captured by media representatives and transmitted globally. Almost immediately it generated pressure by anti-coalition supporters to stop the offensive. It also generated pressure from the international community. The IIG and coalition, however, was prepared to handle the situation, devising a suitable response that did not prematurely end combat operations, while addressing the incident appropriately.

Resolutions

Operation Al Fajr appears to have succeeded. Control of Fallujah once again rested with people responsive to the IIG. I-MEF forces started the reconstruction projects to repair the damage caused by their fighting. With urban warfare complete, I-MEF was able to resume its counter-insurgency strategy and re-build local support. Anti-coalition activity significantly decreased on the outskirts of Fallujah. In the eight weeks between the disbanding of the Fallujah

Brigade and commencing of Operation Al Fajr, news reports from Fallujah focused on Fallujah Resistance activity and coalition actions against it. These activities and subsequent responses were generally violent in nature. In the months following the establishment of the Civil Military Operations Center in Fallujah on 21 November 2004, news reports from the city have been noticeably absent of violence and focused on reconstruction and stability.[59] A more telling sign of success was the recent Iraq National elections held 30 January 2005 were Fallujah accounted for forty-four percent of all votes cast in the Al Anbar province.[60] The successful integration of the Three Block War with Network Centric Warfare in Fallujah proved successful and conveyed a signal to other insurgent strongholds like Ramadi that insurgent safe havens would not be tolerated.

Lessons Learned

Several lessons can be drawn from the events leading up to the first offensive in Fallujah as well as events following that first offensive. An initial focus on the major lessons learned from Operation Vigilant Resolve will illustrate what lessons were also applied and to what effect during Operation Al Fajr. High on this list was the use of information. The fight for Fallujah also identified and applied lessons re-learned, like the importance of small unit leaders, role of technology, and characterization of the enemy. There were other issues identified during Operation Vigilant Resolve that do not qualify as either lessons learned or re-learned as they identified areas for further debate and study. Primary among these was the role of civilian leadership.

---

[58] United States Central Command, "Possible Law of Armed Conflict Violation Under Investigation," *CENTCOM News Release*, 16 November 2004, release number: 04-11-53.

[59] United States Central Command, "Civil Military Operations Center in Fallujah," *CENTCOM News Release*, 22 Nov 2004, release number: 04-11-75.

[60] Scott Peterson, "Fallujans welcome security, await electricity," *The Christian Science Monitor* [online], 8 Feb 2005, (accessed 9 Feb 2005); available from http://www.csmonitor.com/2005/0208/p01s02-woiq.htm.

The use of information stands out as a significant lesson learned and applied by the IIG and coalition. Leading up to and during the conduct of Operation Vigilant Resolve, I-MEF arguably had tactical information dominance. They were able to use sophisticated and simple systems to build situational awareness around Fallujah. Sophisticated systems included satellites and aircraft capable of intercepting cell phone communication and delivering real time video of the city. Simple systems included collecting information from informants, agents, and field reports. These simple systems, while extremely useful, were relatively nascent, limiting their potential contribution. Combined with the sophisticated systems, however, a significant amount of relevant information was available.

The lesson learned and subsequently applied relating to information has more to do with strategic information, however. Leading up to Operation Vigilant Resolve, the IGC, CPA, and I-MEF were forced to react to information, limiting their ability to control events. Broadcast of the Blackwater ambush and subsequent spontaneous celebrations generated pressure for quick and unambiguous retribution, something favored by the anti-coalition forces. A harsh response by the coalition supported much of the claims promoted by the Fallujah Resistance and anti-coalition force. The harsh response served to fuel the counter-insurgency in Fallujah and across Iraq. While I-MEF recognized this, the IGC and CPA did not. They did not have the time or resources to process all the information on the situation and come to the same conclusion. The result was Operation Vigilant Resolve.

It took until the conclusion of Operation Vigilant Resolve before the value of strategic information dominance was applied. The IGC and CPA were again unable to process the vast information fast enough to head off demands to prematurely end Operation Vigilant Resolve. Anti-coalition forces used information concerning the fight to portray the operation as a

massacre and slaughter. I-MEF forces, making significant progress destroying the Fallujah Resistance and eliminating their base of support were forced to stop.

The IGC and coalition did not have the same problem during Operation Al Fajr. They were able to process relevant information and make appropriate adjustments before that same information was used against them. They also limited the availability of negative information by ensuring objective and verifiable reporting from the Fallujah General Hospital. Their ability to respond to the potentially harmful airing of a Marine's action on 13 November is further evidence that the IGC and coalition learned and applied valuable lessons concerning strategic information dominance for Operation Al Fajr.

The first lesson re-learned was the importance of small unit leaders. This lesson was re-learned in small part as a result of failure but in greater part as the result of success. The failure was in the form of poor judgment used by the Blackwater contractors. Their decision to drive through the center of Fallujah on 31 March 2005, despite the well-known threats, triggered the series of events that ultimately ended in Operation Al Fajr. The four members killed that morning forced I-MEF to suspend its counter-insurgency strategy and adopt an urban warfighting campaign.

To a much larger extent, success emphasized the importance of small unit leaders. Decisions made by relatively young and inexperienced leaders on a continuous basis provided the IGC and coalition with the appropriate space to make decisions. During Operation Vigilant Resolve, their decisions directly contributed to the successes on the battlefield. During the ceasefire, their restraint and judgment prevented anti-coalition forces from instigating unjustified violations. The presence of global media representatives compounded the significance of small unit leader

decisions, as a bad decision would surely be transmitted to a global audience. The lesson was re-applied during Operation Al Fajr where the only questionable small unit leader decision was that made on 13 November. While the implications of that decision are serious, a full investigation is underway to determine if it was in fact a poor decision.

The role of technology was also re-learned during Operation Vigilant Resolve and was related to the importance of small unit leaders. This lesson was also the result of successes. Technology was used to enhance the capabilities of the small unit leaders. Operators drove the acquisition of new equipment. They analyzed the tasks they were expected to perform and identified capabilities that would enhance their ability to perform these tasks. Technology, in the form of new equipment, was not pushed down to operators. Warfare, particularly urban and counter-insurgency warfare, is characterized by a violent clash between people. "No degree of technological development or scientific calculation will"[61] change that. As a result, people, not equipment will determine the results of warfare. Equipment that does not enhance a person's capability to fight is of little use to the warrior. To determine what will enhance capability, development should be closely tied to the war fighter who can provide the appropriate input and feedback. Close association will ensure technological developments are responsive to the war fighter and correspondingly useful to the small unit leader. This was the case for Operations Vigilant Resolve and Al Fajr.

The third lesson re-learned had to do with the characterization of the enemy. In situations where confrontation is highly probable, it is easy and natural to characterize an opponent as inferior, incompetent, or weak. This phenomenon is articulated well by John Stoessinger in his

[61] United States Marine Corps, *MCDP-1: Warfighting*, (Washington D.C.: U.S. Government Printing Office, 1997) 14.

book *Why Nations Go to War* when he looks at the profiles of various leaders. Doing so, however, can have disastrous results. Preparing for and during Operation Vigilant Resolve, I-MEF consciously avoided this potential pitfall by treating the Fallujah Resistance as deadly adversaries. Anti-coalition forces had demonstrated not only a high level of skill but also a capacity to learn and adapt its tactics. I-MEF knew it faced a thinking adversary who learned from every engagement and approached Operation Vigilant Resolve and Al Fajr accordingly. The plan for Operation Vigilant Resolve used a hammer and anvil approach. They set up the anvil in the northwest corner of Fallujah and used forces to the east and southeast as the hammer, driving the Fallujah Resistance against the anvil. For Operation Al Fajr, they changed their approach because they assumed the Fallujah Resistance would be prepared for a hammer and anvil. For the new offensive, I-MEF used a sweep and clear approach, clearing the city from north to south with forces arrayed east to west.

The last area for learning concerns the roles of civilian leadership. This is an area for learning as opposed to a lesson learned because there remains much to be debated and studied. The issue is not a new issue, but was nonetheless crystallized in the days leading up to Operation Vigilant Resolve. The military on the ground developed an assessment that differed from that of the civilian leadership. Despite numerous attempts to convince the civilian leadership about the limitations of their analysis and merits of the military analysis, the civilian analysis ruled the day. The military dutifully discharged its orders even though it knew it was the wrong course of action to pursue. This dissatisfaction surfaced to the public's attention in September 2004 when I-MEF's Commanding General voiced his frustration with the decision.

This situation was not unique to Operation Vigilant Resolve as it has been repeated throughout history and will likely be repeated again. The rate, quantity, and pace of information

movement on the modern battlefield, however, may strain a fundamental principle of western democracy, civilian leadership of the military. The fluid nature of information combined with speed it is made available may place the military in a position where it has the best situational awareness. The perishablility of information may severely limit the military's ability to bring the civilian leadership up to date on the pertinent information in a timeframe suitable to use the information. Without a common operating picture, the military unit with the best information may have limited authority to use it. In Fallujah, the situation led to different courses of action by the military and CPA. The friction and outcome that resulted from the differences as well as the likelihood there will differences in levels of understanding in the future leading to more friction in the civil-military relationship in other situations make this issue worthy of further study.

IMPLICATIONS FOR FUTURE STRATEGIC CORPORAL ROLES

Introduction

The evolving security system suggests that future battles, not just in Iraq, will likely resemble the battle for Fallujah. The success of I-MEF in Fallujah may therefore serve as a case study for forces preparing for these types of battles. While every situation will be different and the actors will have particular strengths and weaknesses, the important role to be played by small unit leaders will nonetheless be significant as it was a center of gravity in Fallujah. Looking at Fallujah, one can start to identify potential roles and implications for small unit leaders that can have strategic effects, turning those small unit leaders into Strategic Corporals.

The fight for and events leading up to the fight for Fallujah emphasized the important role of the small unit leader. His actions, decisions, and hard work greatly contributed to the successes of Operations Vigilant Resolve and Al Fajr. These successes were realized at the tactical level,

wining firefights; operational level, denying anti-coalition forces a sanctuary; as well as at the strategic level by having Fallujah participate in the 30 January 2005 elections. They gave additional depth and meaning to the concept of the Strategic Corporal. Small unit leaders also were central to the application and integration of technological advancements. New systems enhancing command and control, reconnaissance, and communication were fielded in direct response to needs identified by small unit leaders to improve their capabilities. A look at the implications of intelligence, command relationships, technology, preparation, media, and integration as they played out in Fallujah may prove beneficial to understanding how to capitalize on the strategic effects of small unit leaders.

Role of Intelligence

The Strategic Corporal has specific needs from intelligence. These needs depend on the phase of an operation and are significantly different from the needs of high-level decision makers and staffs. During the training and preparation phase, the small unit leader will need intelligence that articulates the context for the specific operation. The context works to provide depth and relevance to the commander's intent and mission oriented order. It allows the Strategic Corporal to understand and anticipate consequences to actions and thus make sound decisions quickly. This intelligence is usually synthesized from various sources and analysis.

During the execution phase of an operation, the type of information required by the Strategic Corporal is different. Intelligence that will help the small unit identify potential danger areas in his immediate vicinity will be of greater value than contextual intelligence. In this phase, access to real-time reconnaissance becomes indispensable. Images can communicate vast amounts of information in a very short time period on situations that are extremely fluid and dynamic.

The Strategic Corporal is more than a simple consumer of intelligence; he is also a producer of intelligence. During the training and preparation phases of operations, the small unit leader can help identify critical areas to focus reconnaissance. During the execution phase, the Strategic Corporal can have first hand information about the disposition of an adversary. Advancements in technology are making it possible for this first hand information to be made available to other consumer.

Role of Command Relationships

Command relationships also play an important role for the Strategic Corporal. The goal and purpose of command relationships is to attain synergistic effects from the operation of numerous small units. Rigid vertical command relationships may unnecessarily slow down the tempo of battle that can be created and sustained by small unit leader actions. Completely flat and horizontal command relationships, however, may prove too difficult to manage on the fluid and dynamic modern battlefield. Poorly established command relationships not only lead to confusion and inefficiency, but also slow down the tempo of operations, limiting the ability to maximize fleeting opportunities. A poorly established command relationship usually results in time consuming interactions between units, shifting some of the Strategic Corporal's attention away from the battle to make sure the appropriate coordination is performed.

In order to maximize the Strategic Corporal's capabilities on the battlefield, an effective command relationship must be established. A way to strike the balance required to unify the efforts of the various small units while providing them the flexibility to analyze and operate independently is to break up operating areas into sectors. Small units are elements of larger units. These larger units can be responsible for sectors, within which their natural subordinate elements operate. Incrementally larger units similarly tie the various sectors together. In

Fallujah, the Strategic Corporal operated at the fire-team and squad level. They reported to a platoon, which reported to a company. The pattern continued with incrementally larger units until it reached I-MEF, which provided the appropriate information to the IIG. This relationship gave the Strategic Corporal the flexibility required to maximize opportunities on the battlefield while contributing to the IIG and I-MEF's strategic objectives.

Role of Technology

A center of gravity on the modern battlefield is the Strategic Corporal. Technological advancements that enhance his capabilities will enhance mission accomplishment. Before a technological advancement can enhance a small unit leader's capabilities, however, a clear understanding of the tasks required by that leader is required. These tasks will often times become context specific. In Fallujah, for instance, a critical task of the small unit leader was to engage and destroy anti-coalition forces in close quarters. Technological advancements enabling small unit leaders to engage opponents at long distances where therefore irrelevant.

In order to identify required tasks of the small unit leader, detailed mission analysis is required. That detailed analysis will identify capabilities that will enhance the small unit leader's ability to accomplish his mission. Once the capability is identified, it is then time to acquiring a system able to provide that need. Frequently, a system optimized for a specific capability is not available. In those instances, a new system must be developed, or an innovative application of an existing system, not optimized for an identified capability, must be pursued. The timeframe and costs associated with developing new systems creates a demand for innovation. Separating the development and application of new technology from capabilities that enhance a small unit leader's performance can prove to be expensive, unresponsive, and ineffective. Establishing and maintaining a strong link with the small unit leader will guide technological innovations.

Supported with this technology, the small unit leader can significantly contribute to strategic objectives.

Role of Preparation

Preparation plays an important role in the effectiveness of the Strategic Corporal. It is a critical component to his ability to make sound and timely decisions on the modern battlefield. Intelligence, discussed earlier, is one element of preparation. Scenario based training is another important aspect of preparation. This familiarizes the small unit leader with likely scenarios he will encounter on the modern battlefield. Thinking through difficult situations before venturing onto the battlefield enables the Strategic Corporal to identify critical information required for a decision as well as better anticipation of situations. Associated with scenario-based training is mission analysis. Detailed mission analysis facilitates the development of relevant and representative scenarios.

Another important aspect of preparation is team building. Developing a strong working relationship with members of the unit enables the Strategic Corporal to quickly direct action and implement his decisions. It reduces unnecessary inter-team communication allowing member to focus on actions in the objective area. The small unit leader has strategic impact when he can synthesize the activities and efforts of his team members into a unified action.

Team building also applies to developing familiarity with equipment. Some equipment may be new, while other equipment may not have been developed specifically for the tasks at hand. Practice using the equipment in a setting representative of the battlefield will maximize its usefulness, making the equipment part of the team. Many times, the equipment will also be the critical link between the small unit leader and the command and supporting organizations, the

larger team so to speak. Practice using the equipment, therefore, also enhances the effectiveness of the force.

Developing the ability to transition between levels of war is another important task to practice during preparation. The dynamic and fluid nature of the modern battlefield will require small unit leaders to transition between low and high intensity operations repeatedly and frequently. Consequently, they must be able to apply their primary skills in various conditions. This ability to transition effectively contributes to the strategic impact of small unit leaders. The application of high intensity combat tactics in a low intensity situation can transform a benign situation to a hostile situation with significant strategic ramifications. The application of deadly force during a civil disturbance is a good example. While it is a tool of the Strategic Corporal in intense combat, deadly force has very limited effects in other situations. Similarly, failures will likely result if low intensity tactics are applied in a high intensity situations. Use of non-lethal force in intense combat will likely result in unnecessary casualties among friendly forces and limit the ability to attain desired objectives. These failures can also have strategic ramifications.

Role of Media

The globalization of media and their ability to transmit information around the world in near real-time has significant impact on modern conflict. It is arguably the major reason why small unit leader action can have strategic effects. It is also unlikely to change, for the media is likely to become more involved. As a result, there are some serious implications for the Strategic Corporal on the modern battlefield.

Media makes it possible for a global audience to witness a small unit leader in action, capturing the effects of his decision real time. These effects can be positive if they create opportunities and support the overall strategy, or they can be negative if they limit future

opportunity or detract from the overall strategy. In order to increase the likelihood of a positive effect, training and preparation should first of all focus on minimizing poor decision-making. It should also include media related training. This training involves making small unit leaders aware of the presence of media but goes beyond that.

To benefit from the presence of media on the modern battlefield, Strategic Corporals should be trained to interact with the media. Interaction will serve several causes. First, it will allow the small unit leader and media representative to open lines of communication, which will allow them to coordinate their efforts. The media looks to cover the fight but does not want to be killed or injured in the process. The small unit leader is responsible for prosecuting the fight and wants to eliminate as many distractions as possible from the objective area. The two objectives are mutually supportable and do not require compromising the media content.

Interaction will also help the media cover the future battlefield more completely. The Strategic Corporal will have an intimate understanding of the battlefield and special insight into what influences an outcome. Interaction with media will enable the media to direct appropriate attention to areas that may be overlooked by people less familiar with the environment. The special insights gained from the Strategic Corporal's experiences will therefore contribute to the objectivity of media reporting.

Embracing the media and preparing the Strategic Corporal to interact with the media can lead to mutual benefits. The military benefits from more objective coverage of the battle as well as insight into what information may be made available to its opponents. The military also reduces the likelihood of harming media representatives attempting to cover a fight. The media gains

special insight to the fighting as well as secure access to cover events. It reduces its risk of becoming a casualty by interacting with the Strategic Corporal.

Role of Horizontal Integration

The modern security environment is complex. It has implications that go beyond the military. Consequently, the modern battlefield is similarly complex. The small unit leader is limited in his capacity to understand all the variables associated with modern battlefield and must focus on his primary task. As a result, the ability to integrate with people and organizations that have different primary tasks than the military becomes important.

The complexity of the modern battlefield exceeds the capacity of the military to function independently. It must rely on other organizations like the State Department, Central Intelligence Agency, and Department of Commerce to name a few. It must also be able to operate with coalition partners and international organizations like the United Nations, Gulf Cooperation Council, and North Atlantic Treaty Organization. Increasingly, non-government organizations like the Red Crescent and private security services have developed the skills best suited to particular situations on the modern battlefield. As the complexities of the modern battlefield are unraveled, the list of relevant actors will likely continue to grow.

The large number of potential actors on the modern battlefield makes it impractical and impossible for a small unit leader to learn the strengths and weaknesses of them all. In order to harness the specialties of these varied organizations and support the Strategic Corporal without forcing him to loose focus on his objective area, one can use the command relationship model discussed above. It is much more efficient and practical to have an understanding of the various organizations located somewhere that is easily accessible by the Strategic Corporal should he need it. This can be a cell consisting of a representatives from select organizations mixed in with

military personnel familiar with them. The best placement of this cell may not be at the highest level of command but at an intermediate level that is more responsive to the small unit leader. If there are not enough cells to distribute to every corresponding intermediate level unit, then processes can be developed enabling these intermediate level units to directly contact the cell, regardless of its placement in the chain of command. In either situation, important subject specific information is made available to the small unit leader very quickly while not detracting from that small unit leader's focus on his objective area.

CONCLUSION

The conflict in Iraq, particularly since the transition to OIF-I Phase IV, has many of the characteristics of what warfare may look like in the modern security environment. Looking at how I-MEF prepared for and conducted operations in Iraq provides a point of reference for future conflicts. Specifically, looking at how I-MEF approached and handled the situation in Fallujah provides a case to study on how a unit prepared for, operated in, and adapted to the modern security environment. I-MEF did this during a period of transformation within the U.S. defense establishment. Pressures to adapt to Network Centric Warfare competed with the Marine Corps' Three Block War. The result proved effective in Fallujah.

As with most things in life, extremes seldom produce lasting results. I-MEF combined aspects of the Three Block War and Net Centric Warfare to form an effective way to address the three primary dynamics of the 21st Century security environment, urbanization of the battlefield, rapid advancements in information technology, and rise of non-state armed groups as adversaries. This combination was put to use during Operation Al Fajr where U.S. Marines used the concepts of the Three Block War enhanced by technological systems developed for Net Centric Warfare to root out armed groups in Fallujah. The nature of the battlefield and opponent

required direct involvement of Marines to determine combatant from noncombatant. This process, however, was enhanced with advanced tactical radios used to communicate between Marine units. Technological advancements also facilitated the communication between small units and supporting arms with the deployment of lightweight laser designators and friendly position locating devices. These devices fed friendly location information into command centers, keeping the various commanders' situational awareness high. A warfighting concept centered on the interaction of small unit leaders in a complex and dynamic environment supported with information technological advancements produced positive results in Fallujah and provides a framework to build on for future encounters.

At the center of this nexus between the Three Block War and Network Centric Warfare was the small unit leader. This small unit leader, primarily focused on tactical success, nonetheless had strategic implications. Overall success depended on success at the tactical level. Mistakes and miscalculations at the tactical level could jeopardize overall success. The result is added significance to the concept of the Strategic Corporal.

The study of I-MEF's actions in Fallujah centered on combat arms Strategic Corporals. The modern battlefield, however, does not have an easily definable front or delineation between combat zones and non-combat zones. As a result, Strategic Corporals exist across all military specialties. A supply corporal leading a convoy is just as likely to face situations where his actions can have strategic implications as the infantry corporal patrolling for insurgents. .

To be sure, the concept of the Strategic Corporal does not imply that there is only one such person. In fact, there are numerous Strategic Corporals. The challenge then becomes unifying the various Strategic Corporals into a unified strategy. I-MEF's merging of the Three Block War

with Network Centric Warfare for the fight in Fallujah provides one possible solution. Understanding this and developing a strategy that can harness the efforts of all the Strategic Corporals on the modern battlefield will significantly enhance the prospects of victory in the future.

BIBLIOGRAPHY

Literature

Alberts, David S., John J. Garstka, and Frederick P. Stein. "Network Centric Warfare: Developing and Leveraging Information Superiority, 2nd ed. Washington D.C.: CCRP, 1999.

Allison, Graham and Philip Zelikow. *Essence of Decision*, 2nd ed. New York: Longman, 1999.

Bush, President George W. *National Security Strategy of the United States of America*. September 2002.

Cebrowski, VAdm. Arthur K. and John J. Garstka. "Network-Centric Warfare: Its Origin and Future." *Proceedings* [online] 124/1/1, no. 139 (January 1998). Accessed 2 November 2004. Available from http://www.usni.org/proceedings/Articles98/PROcebrowski.htm.

Cohen, Elliot A. "A Revolution in Warfare." *Foreign Affairs* [online] 75, no. 2 (March-April 1996). Accessed 16 November 2004. Available from LexisNexis.

Fallows, James. "Blind Into Baghdad." *The Atlantic Monthly* [online] v293 i1 (January/February 2004). Accessed 25 January 2005. Available from Tufts Library General Reference Center Gold InfoTrac.

Hagee, Gen. Michael W. *33rd Commandant of the Marine Corps' Guidance* [online]. Washington D.C.: Headquarters United States Marine Corps, 2002. Accessed 24 October 2004. Available from http://www.usmc.mil/cmc/33cmc.nsf/attachments/$FILE/33cpg.pdf.

_____. Commandant of the Marine Corps, United States Marine Corps, testimony before the Senate Armed Services Committee Concerning Posture on 10 February 2004.

Hammes, Col Thomas X, USMC. *The Sling and the Stone*. St. Paul MN: Zenith Press, 2004.

Joint Doctrine Encyclopedia [online]. 16 July 1997. Accessed 16 October 2004. Available from http://www.dtic.mil/doctrine/jrm/encyclop.pdf.

Jones, Gen James L. *Marine Corps Strategy 21*. Washington D.C.: Headquarters United States Marine Corps, 2000.

Kagan, Frederick W. "War and Aftermath." *Policy Review* 120, (August-September 2003): 2-27.

Krulak, Gen Charles C. "Cultivating Intuitive Decisionmaking." *Marine Corps Gazette* [online]. (May 1999). Accessed 15 October 2004. Available from http://www.aulaf.mil/au/awc/awcgate/usmc/cultivating_intuitive_d-m.htm.

_____. "The Strategic Corporal: Leadership in the Three Block War." *Marines Magazine* 28, no. 1 (January 1999): 28-34.

Martel, William C., ed. *The Technological Arsenal*. Washington D.C.: Smithsonian Institution, 2001.

Operation al-Fajr (Dawn) [online]. GlobalSecurity.org, 15 November 2004. Accessed 4 December 2004. Available from http://globalsecurity.org/military/ops/oif-phantom-fury-fallujah.htm.

Operation Vigilant Resolve [online]. GlobalSecurity.org, 18 October2004. Accessed 4 December 2004. Available from http://globalsecurity.org/military/ops/oif-vigilant-resolve.htm.

Pfaltzgraff, Robert L. and Richard H. Shultz, ed. *War in the Information Age*. Washington D.C.: Brassey's, 1997.

Rumsfeld, Donald H. "Tranforming the Military." *Foreign Affairs* [online] 81, no. 3 (May-June 2002). Accessed 2 October 2004. Available from LexisNexis.

Snyder, Glenn H. and Paul Diesing. *Conflict Among Nations*. Princeton, NJ: Princeton University Press, 1977.

Talbot, David. "How Technology Failed in Iraq." *Technology Review* [online] 107, no. 9, (November 2004). Accessed 13 November 2004. Available from Tufts Library General Reference Center Gold InfoTrac.

Toffler, Alvin and Heidi. *War and Anti-War*. New York: Warner Books, 1993.

United Nations Department of Economic and Social Affairs, Population Division. *World Urbanization Prospects, The 2003 Revision: Data Tables and Highlights* [online]. Accessed 23 January 2005. Available from http://www.un.org/esa/population/publications/wup2003/WUP2003Report.pdf.

United States Department of Defense. "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)." *Department of Defense Directive*. Number 4630.5, 5 May 2004.

United States Marine Corps. *MCDP-1: Warfighting*. Washington D.C.: U.S. Government Printing Office, 1997.

von Hippel, Karin. *Democracy by Force*. Cambridge, UK: Cambridge University Press, 2000.

Zeigler, Matt. *Three Block War: U.S. Marines in Iraq*. Lincoln NE: iUniverse, Inc, 2004.

Transcripts and Interviews

Allen, Scott A. "Marine Corps System Command Support to I-MEF for OIF." Telephone interview with author, 23 February 2005.

Bierman, LtCol James W., USMC. "I-MEF's Road to War, Operation Iraqi Freedom I and II." Interview with author, Camp Pendleton, CA, 14 January 2005.

Bremer, L. Paul. Transcript of "Remarks to Governing Council and Baghdad City Council," 24 March 2004 [online]. Accessed 16 October 2004. Available from http://www.iraqcoalition.org/transcripts/20040324_Bremer_100.html.

Brown, Col Larry, USMC (Retired). "I-MEF in Operation Iraqi Freedom I and II." Interview by author, Camp Pendleton, CA, 17 February 2005.

Bush, President George W. Transcript of "President Bush Announces Major Combat Operations in Iraq Have Ended," 1 May 2003. Accessed 18 October 2004. Available from http://www.whitehouse.gov/news/releases/2003/05/iraq/20030501-15.html.

_____. Transcript of "Radio Address of the President to the Nation" 10 April 2004. Accessed 2 November 2004. Available from http://www.whitehouse.gov/news/releases/2004/04/20040410.html.

_____. Transcript of "President Bush Discusses the Iraqi Interim Government" 1 June 2004. Accessed 2 November 2004. Available from http://www.whitehouse.gov/news/releases/2004/06/20040601-2.html.

_____. Transcript of "President Bush Discusses Early Transfer of Iraqi Sovereignty" 28 June 2004. Accessed 2 November 2004. Available from http://www.whitehouse.gov/news/releases/2004/06/20040628-9.html.

Carpenter, GySgt Jon T., USMC. "Preparing the Iraqi Police Force." Interview with author, Camp Pendleton, CA, 14 January 2005.

Casey, Gen. George. Transcript of teleconference "DoD Briefing – Iraq Security Forces and Multinational Forces Offensive Actions in Fallujah, Iraq" 8 November 2004. Accessed 23 November 2004. Available from http://www.defenselink.mil/transcripts/2004/tr20041108-1542.html.

Fisher, Col Steve, USMC (Retired). "Marine Corps Warfighting Lab Support to I-MEF for OIF." Telephone interview with author, 26 February 2005.

Gunther, Col Christopher J., USMC (Retired). "Preparing I-MEF for Operation Iraqi Freedom I." Telephone interview with author, 2 Mar 2005.

Johnson, Col "Rich", USMC. "I-MEF Operations Center during OIF." Interview by author, Camp Pendleton, CA, 14 January 2005.

Kachelein, LtCol Stephan, USMC. "Marine Corps Combat Development Command Support to I-MEF for OIF." Telephone interview with author, 25 February 2005.

Kimmitt, BGen. Mark, and Dan Senor. Transcript of "Coalition Provisional Authority Briefing," 31 March 2004 [online]. Accessed 16 October 2004. Available from http://www.iraqcoalition.org/transcripts/20040331_Mar31_KimmittSenor.html.

_____. Transcript of "Coalition Provisional Authority Briefing," 1 April 2004 [online]. Accessed 16 October 2004. Available from http://www.iraqcoalition.org/transcripts/20040401_Apr1_KimmittSenor.html.

_____. Transcript of "Coalition Provisional Authority Briefing," 9 April 2004 [online]. Accessed 16 October 2004. Available from http://www.iraqcoalition.org/transcripts/20040409_Apr9_KimmittSenor.html.

Kimmitt, BGen. Mark, and Mark Bayley. Transcript of "Coalition Provisional Authority Briefing," 10 April 2004 [online]. Accessed 16 October 2004. Available from http://www.iraqcoalition.org/transcripts/20040410_Apr10_KimmittBayley.html.

Krulak, Gen Charles C. Transcript of "The Three Block War: Fighting in Urban Areas." Draft Remarks for The National Press Club 10 October 1997 [online]. Accessed 16 October 2004. Available from http://www.usmc.mil/cmcspeeches.nsf/0/6f38a0fe88a127fa85256530006f3951?.

LeMay, SSgt Simon. "OIF Combined Action Program Training and Preparation." Telephone interview with author, 24 November 2004.

McClellan, Scott. Transcript of "White House Press Briefing," 31 March 2004 [online]. Accessed 16 October 2004. Available from http://www.whitehouse.gov/news/releases/2004/03/20040331-4.html.

_____. Transcript of "White House Press Briefing," 8 November 2004 [online]. Accessed 4 December 2004. Available from http://www.whitehouse.gov/news/releases/2004/11/20041108-1.html.

_____. Transcript of "White House Press Briefing," 10 November 2004 [online]. Accessed 4 December 2004. Available from http://www.whitehouse.gov/news/releases/2004/11/20041110-4.html.

Metz, LtGen Thomas. Transcript of "Special Defense Department Video Teleconference Briefing," 9 November 2004 [online]. Accessed 4 December 2004. Available from http://www.dod.mil/transcripts/2004/tr20041109-156.html.

Quinonez, LtCol Edward, USMC. "I-MEF Liaison Efforts with CJTF-7." Interview by author, Camp Pendleton, CA, 14 January 2005.

Russell, Maj Joseph, USMC. "SASO Training in Preparation for OIF." Telephone interview with author 17 November 2004.

Spraug, LtCol Robert, USMC. "I-MEF Liaison Efforts with CPA." Interview by author, Camp Pendleton, CA 14 January 2005.

Updegrove, LtCol Elizabeth, USMC. "I-MEF Innovation Efforts in Support of OIF." Telephone interview with author 16 February 2005.

United States Central Command. Transcript of "U.S. Central Command Background Briefing," 5 April 2004 [online]. Accessed 16 October 2004. Available from http://www.defenselink.mil/transcripts/2004/tr20040405-0580.html.

News Papers and Press Releases

Beeston, Richard. "Marine put Sensitive Side on Hold." *The Times (London)* [online], 2 April 2004. Accessed 29 September 2004. Available from LexisNexis.

Chan, Sewell. "Descent Into Carnage in a Hostile City; in Fallujah, Mob Unleashes Its Rage." *The Washington Post* [online], 1 April 2004. Accessed 10 October 2004. Available from LexisNexis.

Chandrasekaran, Rajiv. "Troops Kill Anti-U.S. Protesters." *The Washington Post* [online], 30 April 2003. Accessed 10 October 2004. Available from LexisNexis.

_____. "Iraqis Vow Revenge for Killing by U.S. Soldiers; Apology Does Little to Placate Anger." *The Washington Post* [online], 14 Sep 2003. Accessed 10 October 2004. Available from LexisNexis

_____. "Key General Criticizes April Attack In Fallujah; Abrupt Withdrawal Called Vacillation." *The Washington Post* [online], 13 Sep 2004. Accessed 10 October 2004. Available from LexisNexis

Chandrasekaran, Rajiv, and Naseer Nouri. "'We Won': Fallujah Rejoices in Withdrawal." *The Washington Post* [online], 2 May 2004. Accessed 16 October 2004. Available from LexisNexis.

Chandrasekaran, Rajiv, and Scott Wilson. "Iraqi City Simmers With New Attack; Grenade Wounds 7 Soldiers in Fallujah." *The Washington Post* [online], 2 May 2003. Accessed 16 October 2004. Available from LexisNexis.

Dominick, Brian. "'Fallujah Brigade' to Disband, Join Resistance in Control of City." *The New Standard* [online], 12 September 2004. Accessed 2 November 2004. Available from http://newstandardnews.net/content/?action=show_item&itemid=977.

"Fallujah Battle Not Military's Choice." *United Press International* [online]l, 14 September 2004. Accessed 16 October 2004. Available from http://www.military.com/NewsContent/0,13319,FL_choice_091404,00.html.

"Fighting Resumes in Fallujah." *Al Jazeera* [online], 6 April 2004. Accessed 2 December 2004. Available from AlJazeera.net.

Garamone, Jim. "Operation Al Fajr' Begins to Retake Fallujah." *American Forces Press Service* [online], 8 November 2004. Accessed 23 November 2004. Available from http://www.defenselink.mil/news/Nov2004/n11082004_2004110809.html.

Garreau, Joel. "Point Men for a Revolution; Can the Marines Survive a Shift From Hierarchies to Networks?" *The Washington Post* [online]. Accessed 2 November 2004. Available from LexisNexis.

_____. "REBOOT CAMP: As War Looms, the Marines Test New Networks of Comrades." *The Washington Post* [online]. Accessed 2 November 2004. Available from LexisNexis.

Gettleman, Jefferey. "Fallujah religious leaders condemn mutilation of Americans, not ambush." *San Diego Union Tribune* [online], 3 Apr 2004. Accessed 26 September 2004. Available from http://www.signonsandiego.com/uniontrib/20040403/news_1n3iraq.html.

Gillespie, Michael. "Reprisal in Fallujah." Accessed 17 October 2004. Available from http://world.mdiamonitors.net/content/view/full/6239/.

Hendawi, Hamza. "Marines Seek to Pacify Fallujah with Show of Force, Residents are Skeptical." *Associated Press Worldstream*, 30 March 2004. Accessed 16 October 2004. Available from LexisNexis.

_____. "U.S. Marines Take Over Iraqi City from U.S. Paratroopers, but Problems Expected to Persist." *Associated Press Worldstream*, 24 March 2004. Accessed 16 October 2004. Available from LexisNexis.

King Jr., Neil and Greg Jaffe. "Killing in Iraq Cast New Cloud Over Rebuilding; Attacks on Civilians Stoke Security Fears Even as U.S. Issues More Work Contracts." *The Wall Street Journal* [online], 1 April 2004. Accessed 16 October 2004. Available from ProQuest.

Lasseter, Tom. "Fighting in Fallujah is Far From Over." *Seattle Times* [online], 10 November 2004. Accessed 22 November 2004. Available from LexisNexis.

Leicht, Cpl Paul. "VMU-1 Pioneer UAV provides 'birds eye' view of combat zone." *USMC News*, 17 September 2004. Story identification number: 200492132448.

Multi-National Corps Iraq. "Fallujah Operations Update," *MNFI News* Release [online], 8 November 2004. Release number 041109c. Accessed 4 December 2004. Available from http://www.mnf-iraq.com/media-information/November/041109c.html.

Oliva, GySgt Mark. "Pendleton Marines cordon Fallujah." *USMC News*, 6 April 2004. Story identification number: 20044674726.

Priest, Dana and Mary Pat Flaherty. "Slain Contractors Were in Iraq Working Security Detail." *The Washington Pos*t [online], 2 Apr 2004. Accessed 29 September 2004. Available from LexisNexis.

Rhem, Kathleen T. "Tensions Remain Between American Troops, Iraqis in Fallujah." *American Forces Press Service* [online], 1 May 2003. Accessed 16 October 2004. Available from http://www.dod.mil/news/May2003/n05012003_200305015.html.

United States Central Command. "Soldiers Come Under Fire in Fallujah." *CENTCOM News Release*, 29 April 2003. Release number: 03-04-205.

_____. "Central Command Investigates Second Fallujah Shooting." *CENTCOM News Release*, 29 April 2003. Release number: 03-04-212.

_____. "1st Marine Expeditionary Force Update." *CENTCOM News Release*, 12 April 2004. Release number: 04-04-09.

_____. "Fallujah Operations Update." *CENTCOM New Release*, 9 November 2004. Release number: 04-11-26.

_____. "Possible Law of Armed Conflict Violation Under Investigation." *CENTCOM News Release*, 16 November 2004. Release number: 04-11-53.

_____. "Civil Military Operations Center in Fallujah." *CENTCOM New Release*, 22 November 2004. Release number: 04-11-75.

Wilson,Scott. "In Mideast, Anger and Solidarity; Arabs Praise Iraqi Insurgents, Condemn U.S. Occupation." *The Washington Post* [online], 10 Apr 2004. Accessed 20 October 2004. Available from LexisNexis.

Wyers, Sgt. Colin. "I MEF Takes Command In Western Iraq." *USMC News*, 25 March 2004. Story identification number: 2004325155339.